CHANGE CONTROL INDEX

LTRS	REVISIONS		
ORIGINATOR	CHECKER	ENGR APP	MATL APP
INITIAL RELEASE CHKU94-1B347-AA-00-FNA-ECN/1 RELEASED 20180921			
FTSI	RWAGNE43	DATOVSKI	--

F-53 MOTORHOME / F-59 COMMERCIAL CHASSIS
INDEX

F-53 / F-59	Page

F-53 MOTORHOME

MODEL LINEUP 2
DIMENSIONAL DATA 3
FRONT STRUCTURE 4
FRAME CROSSMEMBER LOCATIONS 5
AXLE / TIRE / VEHICLE HEIGHT DATA 6

F-59 COMMERCIAL CHASSIS

MODEL LINEUP 7
DIMENSIONAL DATA 8
FRONT STRUCTURE 9
FRAME CROSSMEMBER LOCATIONS 10
AXLE / TIRE / VEHICLE HEIGHT DATA 11
TEMPORARY SHIPPING COMPONENTS 12

F-53 MOTORHOME / F-59 COMMERCIAL CHASSIS

FUEL FILLER PIPE 13
EVAPORATIVE EMISSIONS EVAP CANISTER 14
BODY & SPECIAL EQUIPMENT INSTALLATION RECOMMENDATIONS 15-21

WARNING:
During the production and servicing of these vehicles, due care should be taken to avoid damaging of safety or emissions related systems such as the braking system, fuel lines, sensors, catalysts, etc. through contacting them while working on adjacent areas of the vehicle. Inadvertent damage can also occur due to adjacent welding/cutting operations, people standing near/on unprotected systems while performing other tasks.

F-53 MOTORHOME
MODEL LINEUP

Drive/WB (in.)	Engine/ Transmission	Maximum GVWR (lbs.)	Maximum Payload (lbs.) (1)	Maximum GCWR/Trailer Weight (lbs.)	GAWR (lbs.) (2) Front	GAWR (lbs.) (2) Rear	Base Strip Chassis Curb Weight (lbs.) (3) Front	Base Strip Chassis Curb Weight (lbs.) (3) Rear	Base Strip Chassis Curb Weight (lbs.) (3) Total
4x2 — 158	6.8L/Auto	16,000	9690	23,000/7000	6500	11,000	3088	3219	6307
4x2 — 178	6.8L/Auto	16,000	9670	23,000/7000	6500	11,000	3109	3221	6330
	6.8L/Auto	18,000	11,630	23,000/5000	7000	12,000	3122	3240	6362
4x2 — 190	6.8L/Auto	16,000	9650	23,000/7000	6500	11,000	3111	3232	6343
	6.8L/Auto	18,000	11,590	23,000/5000	7000	12,000	3176	3227	6403
4x2 — 208	6.8L/Auto	18,000	11,530	23,000/5000	7000	12,000	3223	3241	6464
	6.8L/Auto	20,500	13,970	26,000/5500	7000(4)	13,500	3259	3271	6530
	6.8L/Auto	22,000	15,300	26,000/4000	8000	15,000	3289	3410	6699
4x2 — 228	6.8L/Auto	18,000	11,460	23,000/5000	7000	12,000	3275	3257	6532
	6.8L/Auto	20,500	13,900	26,000/5500	7000(4)	13,500	3311	3287	6598
	6.8L/Auto	22,000	15,210	26,000/4000	8000	15,000	3348	3437	6785
	6.8L/Auto	24,000	16,730	30,000/6000	9000	15,500	3500	3767	7267
	6.8L/Auto	26,000	18,720	30,000/4000	9000	17,500	3500	3779	7279
4x2 — 242	6.8L/Auto	22,000	15,140	26,000/4000	8000	15,000	3390	3462	6852
	6.8L/Auto	24,000	16,660	30,000/6000	9000	15,500	3542	3792	7334
	6.8L/Auto	26,000	18,650	30,000/4000	9000	17,500	3542	3804	7346
4x2 — 252	6.8L/Auto	24,000	16,610	30,000/6000	9000	15,500	3555	3826	7381
	6.8L/Auto	26,000	18,600	30,000/4000	9000	17,500	3572	3822	7394

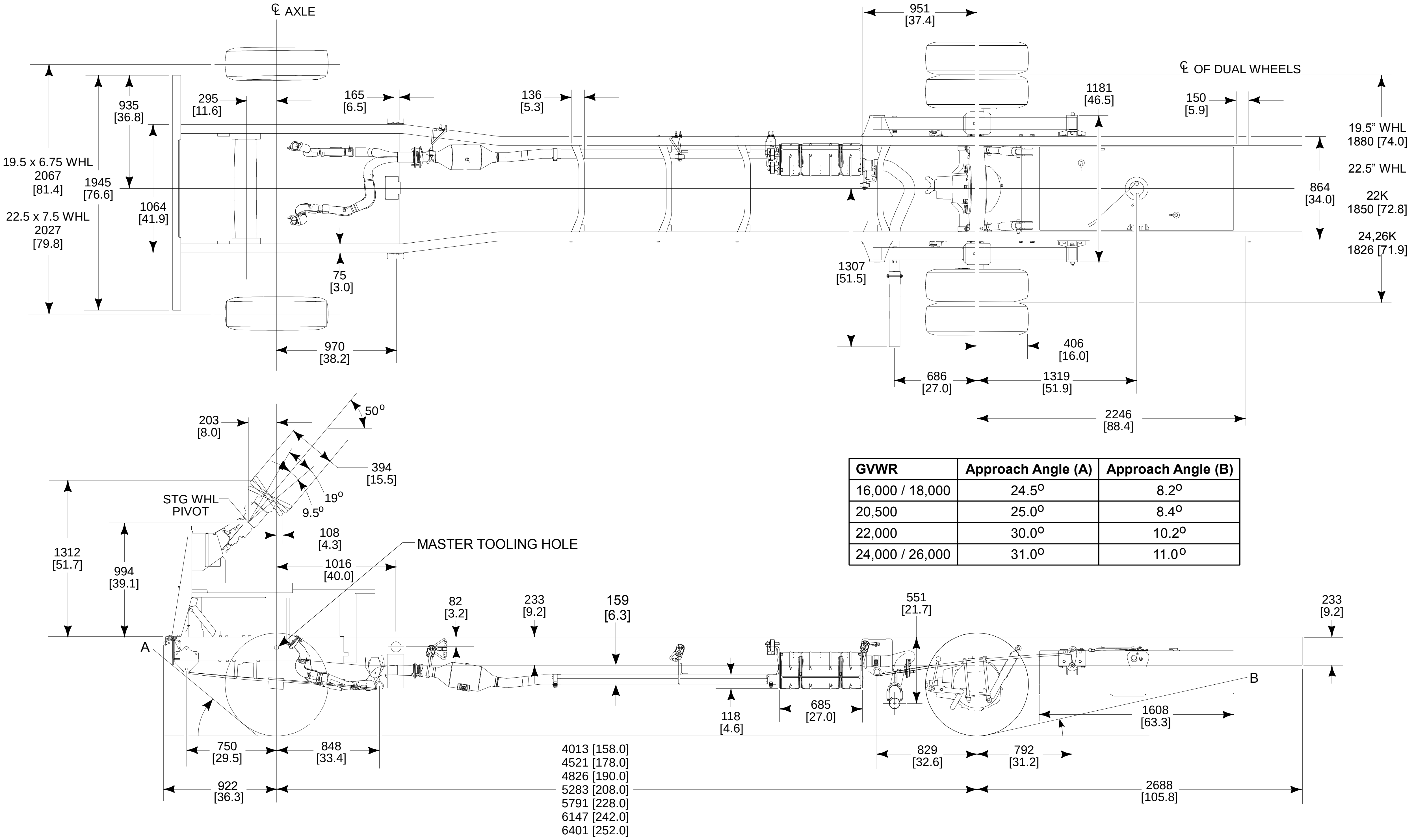
(1) Load rating represents maximum allowable weight of people, cargo and body equipment and is reduced by optional equipment weight.

(2) Gross Axle Weight Rating is determined by the rated capacity of the minimum component of the axle system (axle, springs, wheels, tires) of a specific vehicle. Front and rear GAWRs will, in all cases, sum to a number equal to or greater than the GVWR for the particular vehicle. Maximum loaded vehicle (including passengers, equipment and payload) cannot exceed the GVW rating or GAWR (front or rear).

(3) Base Curb Weights shown above consider the strip chassis weight with standard equipment, full fuel tank and other fluids filled to capacity. Optional equipment weights are in pounds as follows (Front/Total): 19.5” x 6.75” Tires and Wheels (optional with 22,000-lb GVWR only) (-39/-76); Track Bar Heavy-Duty Front Suspension (optional with 16,000-lb. GVWR only) (32/32).

(4) Optional F/GAWR 7500 lbs.

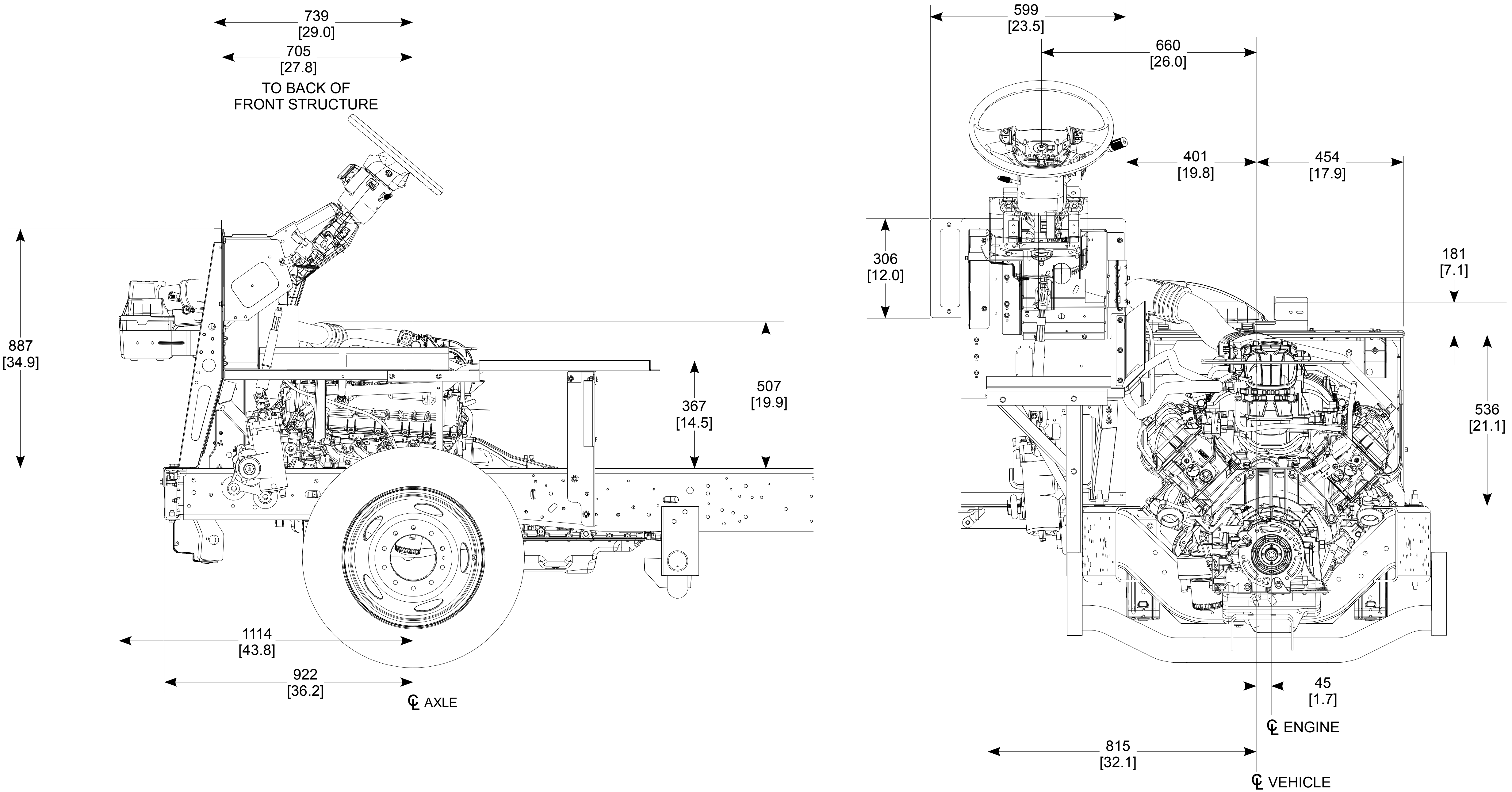
F-53 MOTORHOME
DIMENSIONAL DATA


℄ AXLE
951
[37.4]
℄ OF DUAL WHEELS
935
[36.8]
295
[11.6]
165
[6.5]
136
[5.3]
1181
[46.5]
150
[5.9]
19.5” WHL
1880 [74.0]
22.5” WHL
864
[34.0]
22K
1850 [72.8]
24,26K
1826 [71.9]
19.5 x 6.75 WHL
2067
[81.4]
1945
[76.6]
1064
[41.9]
22.5 x 7.5 WHL
2027
[79.8]
75
[3.0]
1307
[51.5]
970
[38.2]
406
[16.0]
686
[27.0]
1319
[51.9]
2246
[88.4]
203
[8.0]
50°
394
[15.5]
19°
9.5°
STG WHL
PIVOT
1312
[51.7]
994
[39.1]
108
[4.3]
1016
[40.0]
MASTER TOOLING HOLE
82
[3.2]
233
[9.2]
159
[6.3]
551
[21.7]
233
[9.2]
A
B
118
[4.6]
685
[27.0]
1608
[63.3]
750
[29.5]
848
[33.4]
4013 [158.0]
4521 [178.0]
4826 [190.0]
5283 [208.0]
5791 [228.0]
6147 [242.0]
6401 [252.0]
829
[32.6]
792
[31.2]
922
[36.3]
2688
[105.8]

GVWR	Approach Angle (A)	Approach Angle (B)
16,000 / 18,000	24.5°	8.2°
20,500	25.0°	8.4°
22,000	30.0°	10.2°
24,000 / 26,000	31.0°	11.0°

NOTE — [ ] DIMENSIONS ARE INCHES.

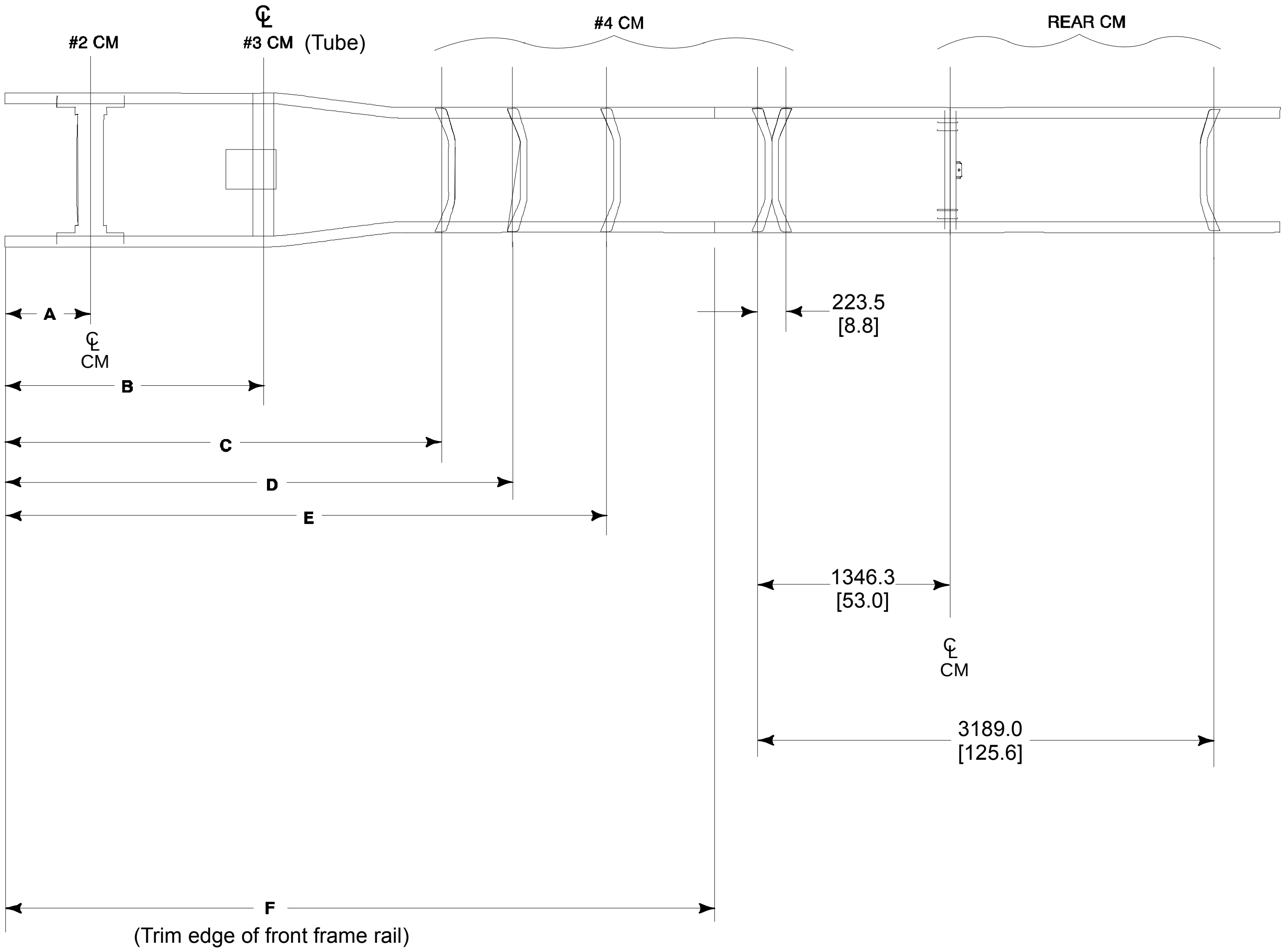
F-53 MOTORHOME
FRONT STRUCTURE


739
[29.0]
705
[27.8]
TO BACK OF
FRONT STRUCTURE
887
[34.9]
367
[14.5]
507
[19.9]
1114
[43.8]
922
[36.2]
℄ AXLE
599
[23.5]
660
[26.0]
401
[19.8]
454
[17.9]
306
[12.0]
181
[7.1]
536
[21.1]
45
[1.7]
℄ ENGINE
815
[32.1]
℄ VEHICLE

NOTE — [ ] DIMENSIONS ARE INCHES.

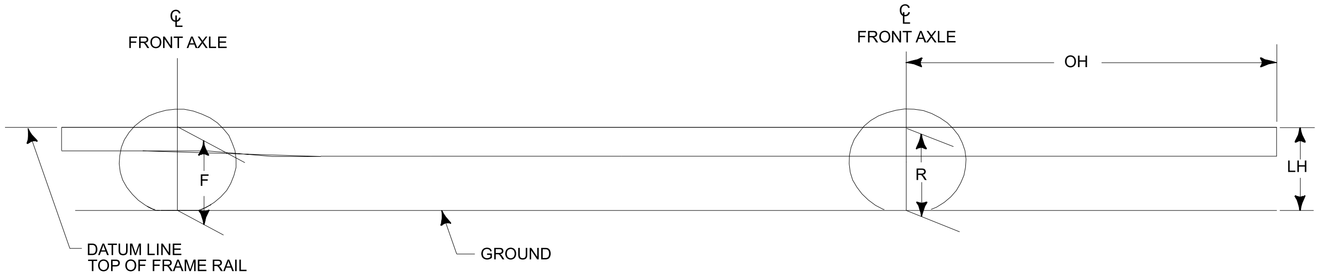
F-53 MOTORHOME
FRAME CROSSMEMBER LOCATIONS

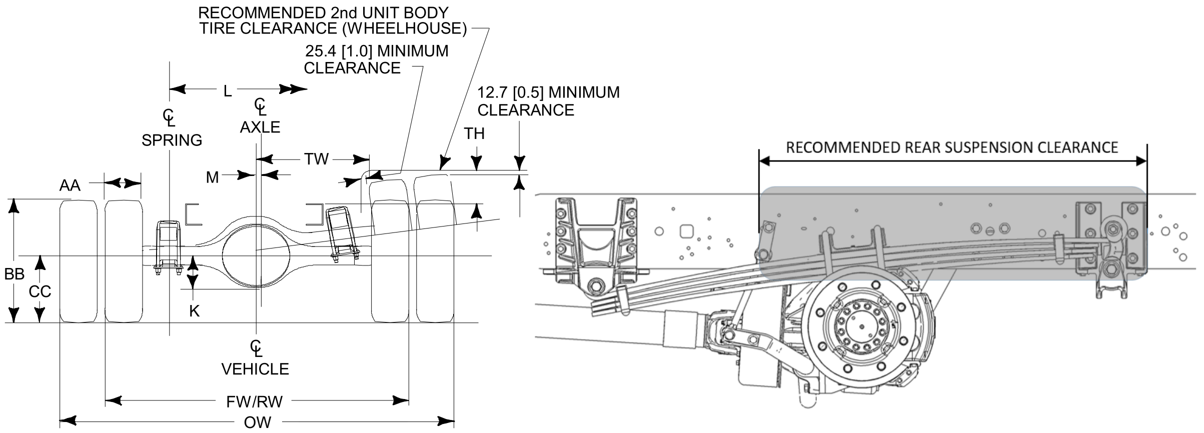
DIM.	158" WB	178" WB	190" WB	208" WB	228" WB	242" WB	252" WB
A	556 [21.9]	556 [21.9]	556 [21.9]	556 [21.9	556 [21.9]	556 [21.9]	556 [21.9]
B	1821 [71.7]	1821 [71.7]	1821 [71.7]	1821 [71.7]	1821 [71.7]	1821 [71.7]	1821 [71.7]
C	NA	NA	NA	3002 [118.2]	3282 [129.2]	3282 [129.2]	3405 [134.1]
D	NA	NA	NA	NA	4004 [157.6]	4004 [157.6]	4329 [170.4]
E	2994 [117.9]	3385 [133.3]	3436 [135.3]	4147 [163.3]	4655 [183.3]	4655 [183.3]	4885 [192.3]
F	3828 [150.7]	4336 [170.7]	4640 [182.7]	5098 200.7]	5606 [220.7]	5962 [234.7]	6216 [244.7]
MEASUREMENTS TAKEN FROM FRONT EDGE OF LOWER FLANGE OF RAIL							


#2 CM
℄
#3 CM (Tube)
#4 CM
REAR CM
A
℄
CM
B
C
D
E
223.5
[8.8]
1346.3
[53.0]
℄
CM
3189.0
[125.6]
F
(Trim edge of front frame rail)

NOTES — UNLESS OTHERWISE NOTED, DIMENSIONS ARE TO THE CENTERLINE OF CROSSMEMBER FASTENERS.
— MEASUREMENTS FROM FRONT EDGE OF LOWER FRAME. SUBTRACT 9 MM IF MEASURED FROM TOP FRONT EDGE OF FRAME WEB.
— [ ] DIMENSIONS ARE INCHES.

F-53 MOTORHOME
AXLE / TIRE / VEHICLE HEIGHT DATA


℄ FRONT AXLE
℄ FRONT AXLE
OH
F
R
LH
DATUM LINE
TOP OF FRAME RAIL
GROUND


RECOMMENDED 2nd UNIT BODY
TIRE CLEARANCE (WHEELHOUSE)
25.4 [1.0] MINIMUM
CLEARANCE
12.7 [0.5] MINIMUM
CLEARANCE
L
℄ SPRING
℄ AXLE
TH
TW
M
AA
BB
CC
K
℄ VEHICLE
FW/RW
OW
RECOMMENDED REAR SUSPENSION CLEARANCE

MODEL	WB	GVWR [lbs]	BASE TIRE	F HEIGHT AT FRONT AXLE(1)(2)	R HEIGHT AT REAR AXLE(1)(2)	LH(2)	OH	K	L	M	AA	BB	CC	FW	RW	REAR WHEEL MEASUREMENTS		
				AT SPRING RATING	AT SPRING RATING	AT SPRING RATING										OW	TH	TW
F-53 Super Duty Class A Motorhome	4013 [158.0] 4521 [178.0] 4826 [190.0]	16,000	245/70R19.5	710 [28.0]	770 [30.3]	803 [31.6]	2688 [105.8]	177 [7.0]	1079 [42.5]	24 [1.0]	236 [9.3]	779 [30.7]	373 [14.7]	2291 [90.2]	1857 [73.1]	2389 [94.0]	270 [10.6]	638 [25.1]
	4521 [178.0] 4826 [190.0] 5283 [208.0] 5791 [228.0]	18,000	245/70R19.5	710 [28.0]	770 [30.3]	782 [30.8]	2688 [105.8]	177 [7.0]	1079 [42.5]	24 [1.0]	236 [9.3]	779 [30.7]	373 [14.7]	2291 [90.2]	1857 [73.1]	2389 [94.0]	270 [10.6]	638 [25.1]
	5283 [208.0] 5791 [228.0]	20,500	245/70R19.5	719 [28.3]	779 [30.7]	790 [31.1]	2688 [105.8]	214 [8.4]	1079 [42.5]	24 [1.0]	248 [9.8]	810 [31.9]	391 [15.4]	2327 [91.6]	1848 [72.8]	2424 [95.4]	283 [11.1]	638 [25.1]
	5283 [208.0] 5791 [228.0]	22,000	245/70R19.5	775 [30.5]	779 [30.7]	866 [34.1]	2688 [105.8]	214 [8.4]	1079 [42.5]	24 [1.0]	248 [9.8]	810 [31.9]	391 [15.4]	2327 [91.6]	1848 [72.8]	2424 [95.4]	283 [11.1]	638 [25.1]
	5791 [228.0] 6147 [242.0]		235/80R22.5	775 [30.5]	835 [32.9]	866 [34.1]	2688 [105.8]	214 [8.4]	1079 [42.5]	24 [1.0]	233 [9.2]	942 [37.1]	443 [17.4]	2305 [90.7]	1785 [70.3]	2423 [95.4]	221 [8.7]	640 [25.2]
	5791 [228.0] 6147 [242.0] 6401 [252.0]	24,000	255/80R22.5	792 [31.2]	861 [33.9]	894 [35.2]	2688 [105.8]	226.5 [8.9]	1079 [42.5]	24 [1.0]	252 [9.9]	941.5 [37.0]	455.7 [17.9]	2354 [92.7]	1783.4 [70.2]	2418 [95.2]	235 [9.2]	594 [23.4]
	5791 [228.0] 6147 [242.0] 6401 [252.0]	26,000	255/80R22.5	792 [31.2]	861 [33.9]	894 [35.2]	2688 [105.8]	226.5 [8.9]	1079 [42.5]	24 [1.0]	252 [9.9]	941.5 [37.0]	455.7 [17.9]	2354 [92.7]	1783.4 [70.2]	2418 [95.2]	235 [9.2]	594 [23.4]

(1)— The **F** and **R** Height Data represent dimensions from ground to “frame datum line” (top of frame rail) of a base/standard vehicle with no options.
(2)— These dimensions are for reference only. Actual height may vary due to production tolerances.

NOTE — [ ] DIMENSIONS ARE INCHES.

(Cont'd next page)

F-59 COMMERCIAL CHASSIS
MODEL LINEUP

Drive/WB (in.)	Engine/ Transmission	Maximum GVWR (lbs.)	Maximum Payload (lbs.) (1)	Maximum GCWR/Trailer Weight (lbs.)	GAWR (lbs.) (2)		Base Strip Chassis Curb Weight (lbs.) (3)		
					Front	Rear	Front	Rear	Total
4x2 — 158	6.8L/Auto	16,000	10,080	23,000/7000	6500	11,000	3054	2857	5911
	6.8L/Auto	19,500	13,480	26,000/6500	7000	13,500	3197	2821	6018
4x2 — 168 (4)	6.8L/Auto	19,500	13,470	27,200/7700	7000	13,500	3198	2828	6026
4x2 — 178	6.8L/Auto	16,000	10,050	23,000/7000	6500	11,000	3191	2754	5945
	6.8L/Auto	19,500	13,460	26,000/6500	7000	13,500	3198	2835	6033
	6.8L/Auto	22,000 (4)	15,750	29,700/7700	8000	15,000	3182	3068	6250
4x2 — 190	6.8L/Auto	19,500	13,400	26,000/6500	7000	13,500	3209	2887	6096
4x2 — 208	6.8L/Auto	19,500	13,310	26,000/6500	7000	13,500	3227	2962	6189
	6.8L/Auto	22,000	15,610	26,000/4000	8000	15,000	3276	3112	6388
	6.8L/Auto	22,000	15,610	29,700/7700 (4)	8000	15,000	3276	3112	6388

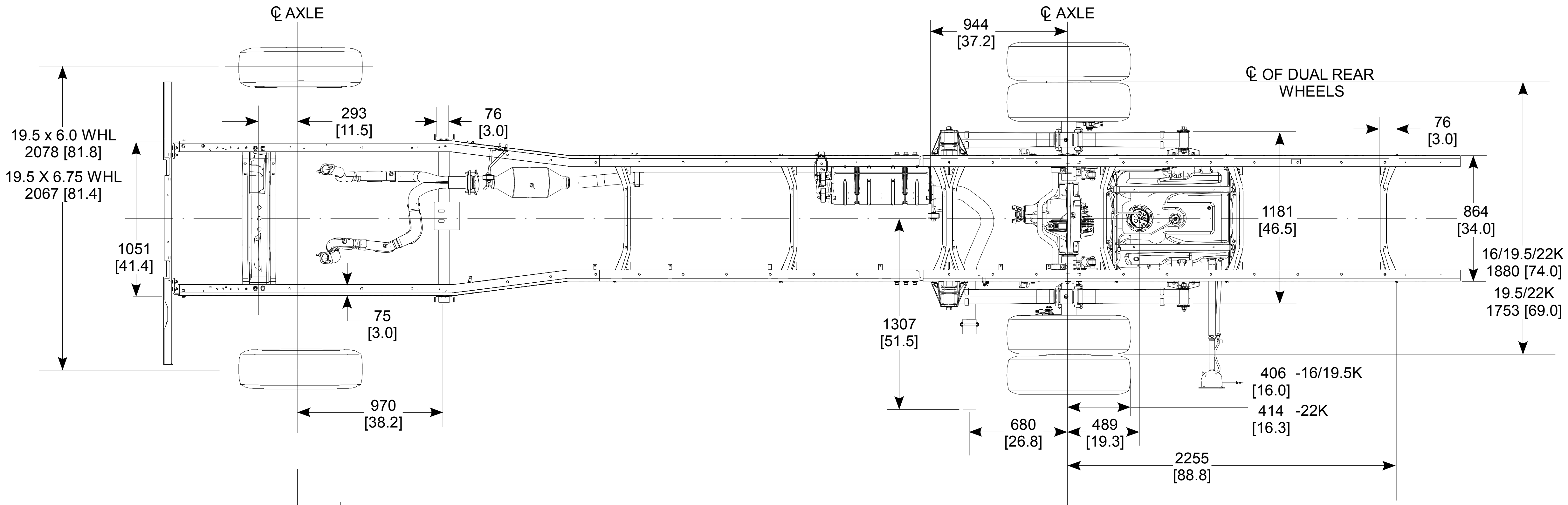
(1) Load rating represents maximum allowable weight of people, cargo and body equipment and is reduced by optional equipment weight.

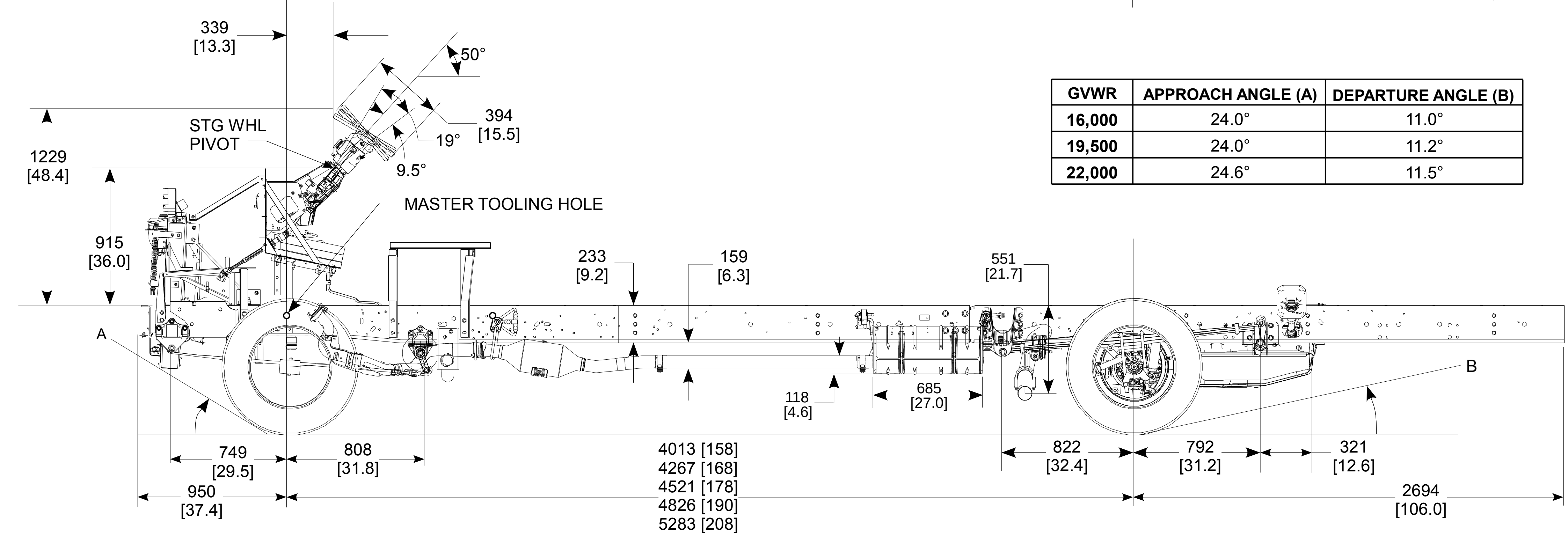
(2) Gross Axle Weight Rating is determined by the rated capacity of the minimum component of the axle system (axle, springs, wheels, tires) of a specific vehicle. Front and rear GAWRs will, in all cases, sum to a number equal to or greater than the GVWR for the particular vehicle. Maximum loaded vehicle (including passengers, equipment and payload) cannot exceed the GVW rating or GAWR (front or rear).

(3) Base Curb Weights shown above consider the strip chassis weight with standard equipment, full fuel tank and other fluids filled to capacity. Optional equipment weights are in pounds as follows (Front/Total): Pull Out Ramp Prep Package (optional with 208” wheelbase only) (50/85).

(4) Parcel Delivery Van Package only.

F-59 COMMERCIAL CHASSIS
DIMENSIONAL DATA

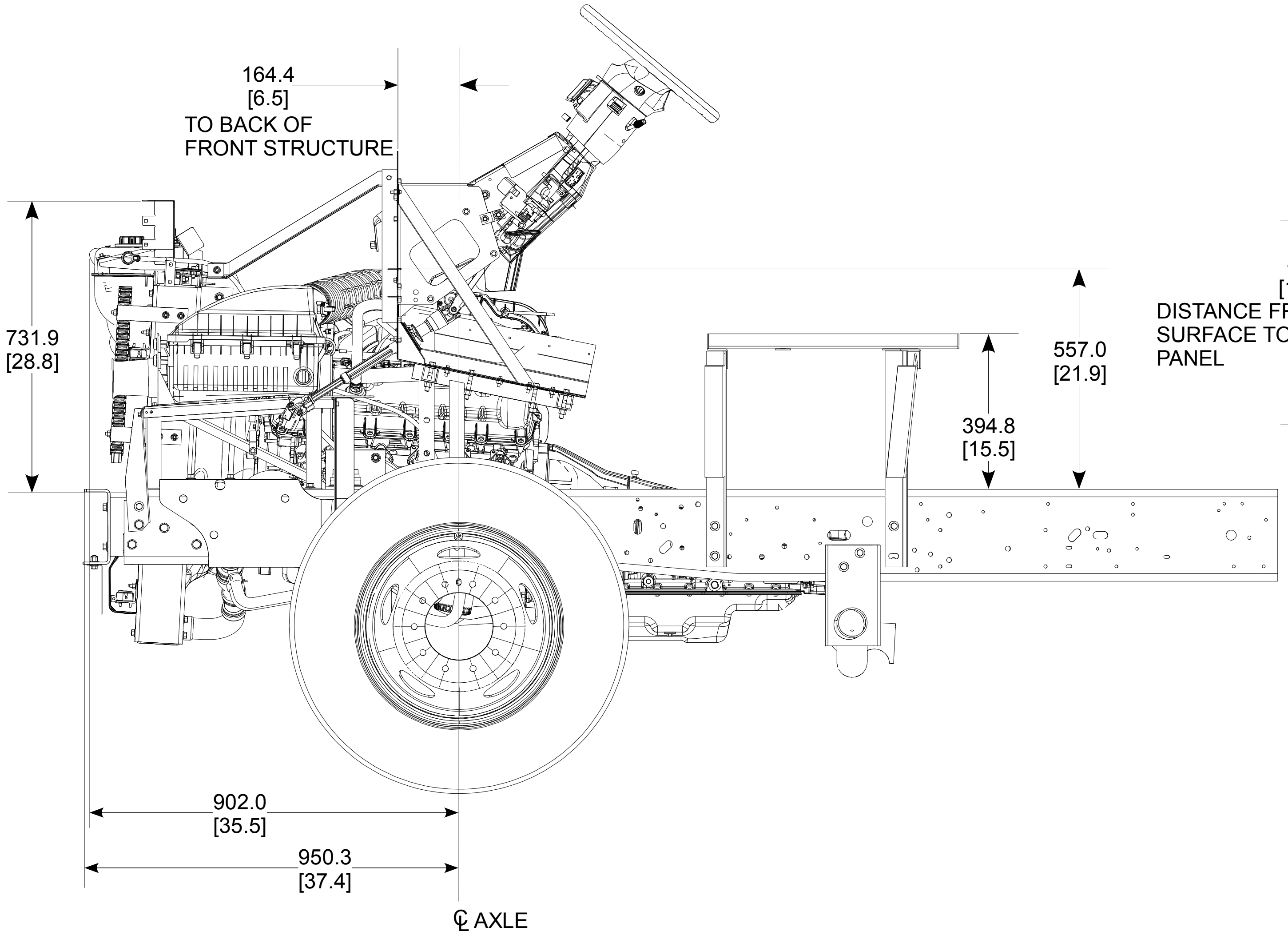

℄ AXLE
293
[11.5]
76
[3.0]
19.5 x 6.0 WHL
2078 [81.8]
19.5 X 6.75 WHL
2067 [81.4]
1051
[41.4]
75
[3.0]
970
[38.2]
944
[37.2]
℄ AXLE
℄ OF DUAL REAR
WHEELS
76
[3.0]
1181
[46.5]
864
[34.0]
16/19.5/22K
1880 [74.0]
19.5/22K
1753 [69.0]
1307
[51.5]
406 -16/19.5K
[16.0]
414 -22K
[16.3]
680
[26.8]
489
[19.3]
2255
[88.8]

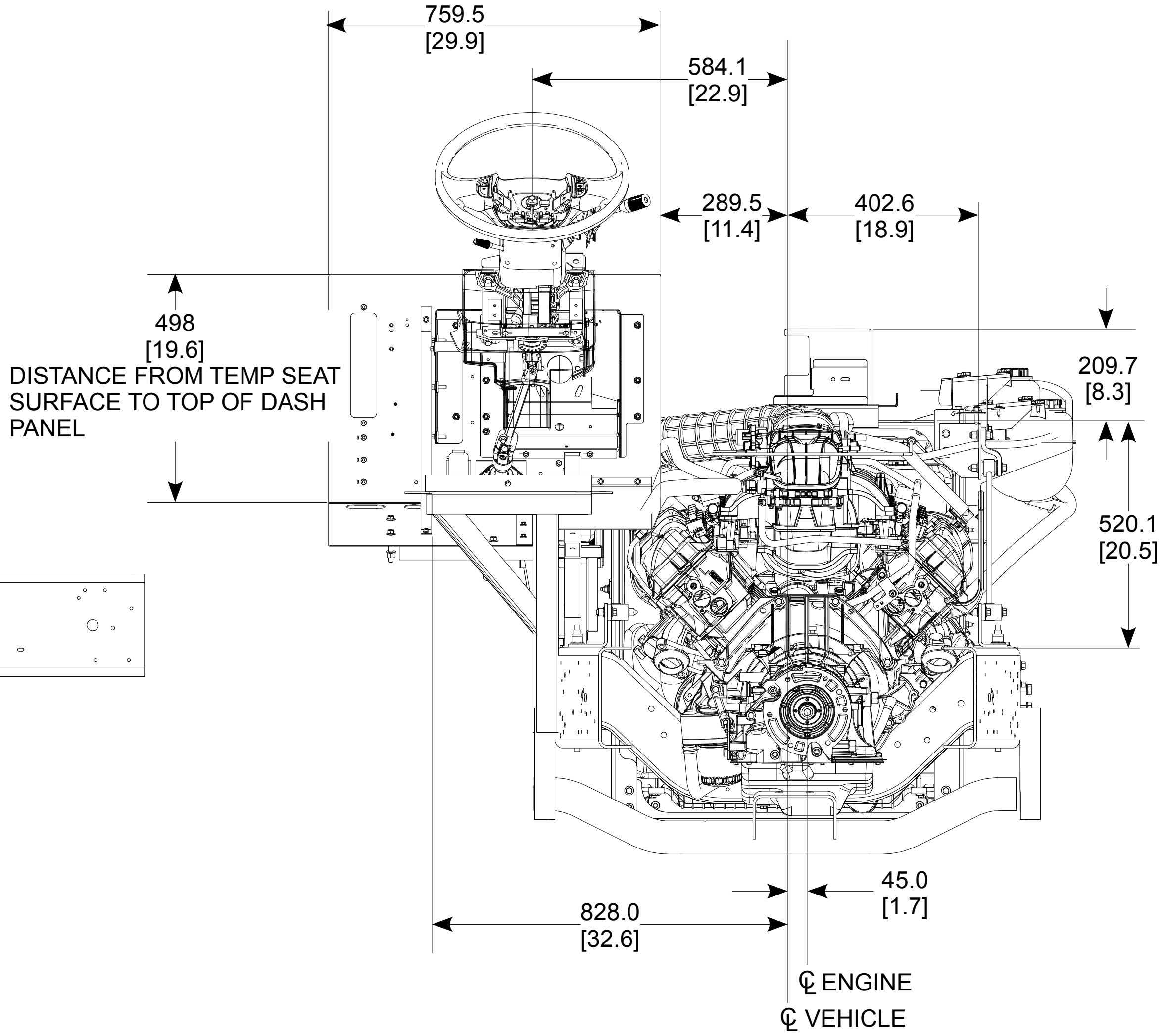

339
[13.3]
50°
394
[15.5]
19°
9.5°
STG WHL
PIVOT
1229
[48.4]
915
[36.0]
MASTER TOOLING HOLE
233
[9.2]
159
[6.3]
551
[21.7]
A
B
118
[4.6]
685
[27.0]
749
[29.5]
808
[31.8]
950
[37.4]
4013 [158]
4267 [168]
4521 [178]
4826 [190]
5283 [208]
822
[32.4]
792
[31.2]
321
[12.6]
2694
[106.0]

GVWR	APPROACH ANGLE (A)	DEPARTURE ANGLE (B)
16,000	24.0°	11.0°
19,500	24.0°	11.2°
22,000	24.6°	11.5°

NOTE — [ ] DIMENSIONS ARE INCHES.

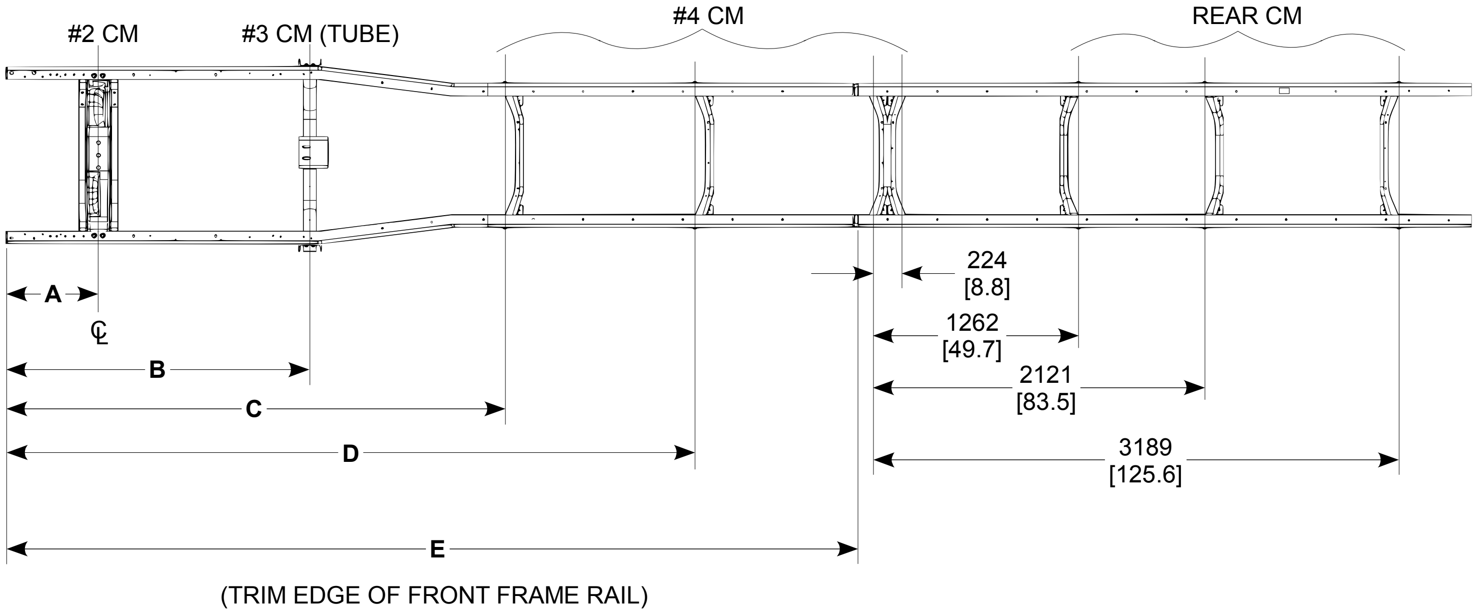
F-59 COMMERCIAL CHASSIS
FRONT STRUCTURE


164.4
[6.5]
TO BACK OF
FRONT STRUCTURE
731.9
[28.8]
557.0
[21.9]
394.8
[15.5]
902.0
[35.5]
950.3
[37.4]
℄ AXLE


759.5
[29.9]
584.1
[22.9]
289.5
[11.4]
402.6
[18.9]
498
[19.6]
DISTANCE FROM TEMP SEAT
SURFACE TO TOP OF DASH
PANEL
209.7
[8.3]
520.1
[20.5]
45.0
[1.7]
828.0
[32.6]
℄ ENGINE
℄ VEHICLE

NOTE — [ ] DIMENSIONS ARE INCHES.

F-59 COMMERCIAL CHASSIS
FRAME CROSSMEMBER LOCATIONS

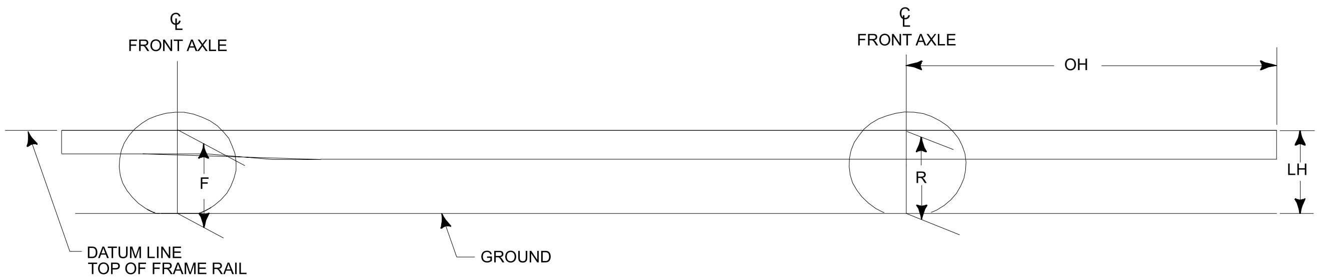

#2 CM
#3 CM (TUBE)
#4 CM
REAR CM
224
[8.8]
1262
[49.7]
2121
[83.5]
3189
[125.6]
A
℄
B
C
D
E
(TRIM EDGE OF FRONT FRAME RAIL)

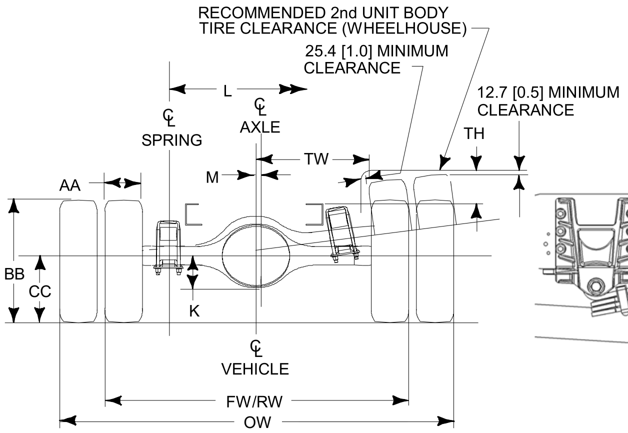
DIMENSION *	158" WB	168" WB	178" WB	190" WB	208" WB
A	556 [21.9]	556 [21.9]	556 [21.9]	556 [21.9]	556 [21.9]
B	1821 [71.7]	1821 [71.7]	1821 [71.7]	1821 [71.7]	1821 [71.7]
C	2994 [117.9]	3133 [123.3]	3385 [133.3]	3436 [135.3]	3002 [118.2]
D	NA	NA	NA	NA	4147 [163.3]
E	3828 [150.7]	4082 [160.7]	4336 [170.7]	4640 [182.7]	5098 [200.7]

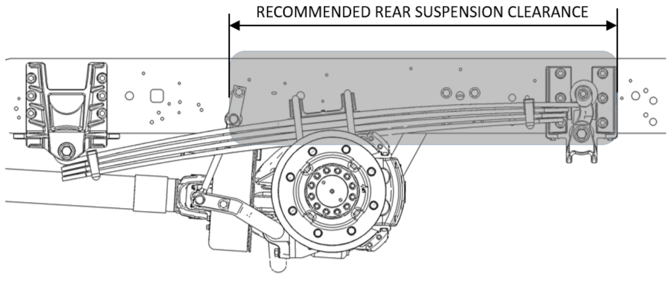
* **NOTE:** Measurement taken from front edge of lower rail flange

NOTES — UNLESS OTHERWISE NOTED, DIMENSIONS ARE TO THE CENTERLINE OF CROSSMEMBER FASTENERS.
— MEASUREMENTS FROM FRONT EDGE OF LOWER FRAME. SUBTRACT 9 MM IF MEASURED FROM TOP FRONT EDGE OF FRAME WEB.
— [ ] DIMENSIONS ARE INCHES.

F-59 COMMERCIAL CHASSIS
AXLE / TIRE / VEHICLE HEIGHT DATA


℄
FRONT AXLE
℄
FRONT AXLE
OH
F
R
LH
DATUM LINE
TOP OF FRAME RAIL
GROUND


RECOMMENDED 2nd UNIT BODY
TIRE CLEARANCE (WHEELHOUSE)
25.4 [1.0] MINIMUM
CLEARANCE
12.7 [0.5] MINIMUM
CLEARANCE
L
℄
SPRING
℄
AXLE
TH
TW
M
AA
BB
CC
K
℄
VEHICLE
FW/RW
OW

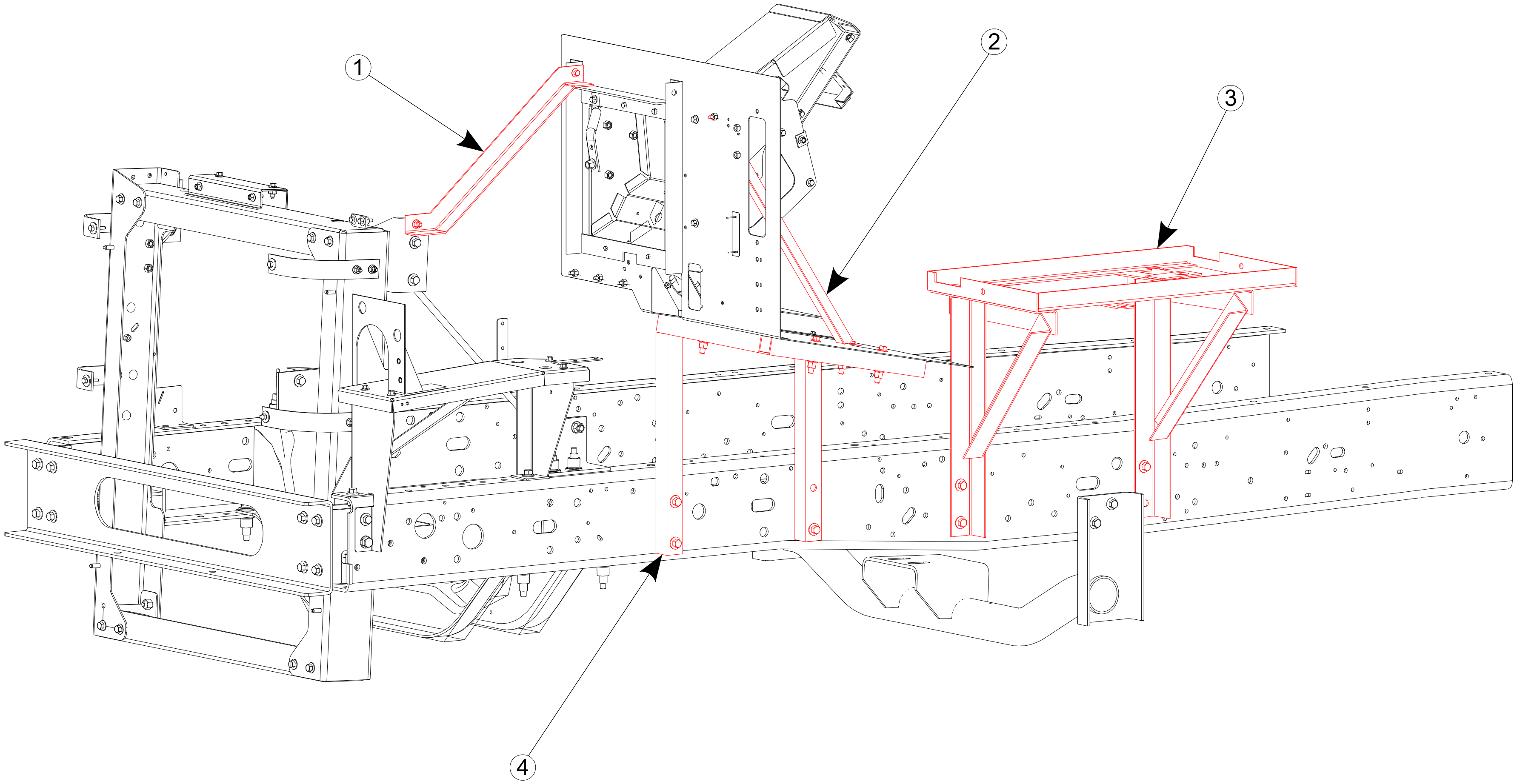

RECOMMENDED REAR SUSPENSION CLEARANCE

MODEL	WB	GVWR	BASE TIRE	F HEIGHT AT FRONT AXLE (1) (2)	R HEIGHT AT REAR AXLE (1) (2)	LH (2)	OH	K	L	M	AA	BB	CC	FW	RW	REAR WHEEL MEASUREMENTS		
				AT SPRING RATING	AT SPRING RATING	AT SPRING RATING										OW	TH	TW
F-59 SUPER DUTY COMMERCIAL CHASSIS	158	16,000	225/70R19.5	800 [31.5]	830 [32.7]	734 [28.9]	2688 [105.8]	177 [6.9]	1079 [42.5]	27.7 [1.1]	236 [9.3]	779 [30.7]	373 [14.7]	2299 [90.5]	1857 [73.1]	2389 [94.0]	270 [10.6]	638 [25.1]
	178		225/70R19.5	800 [31.5]	830 [32.7]	734 [28.9]	2688 [105.8]	177 [6.9]	1079 [42.5]	27.7 [1.1]	236 [9.3]	779 [30.7]	373 [14.7]	2299 [90.5]	1857 [73.1]	2389 [94.0]	270 [10.6]	638 [25.1]
	158	19,500	225/70R19.5	787 [31.0]	835 [32.9]	747 [29.4]	2688 [105.8]	179 [7.0]	1079 [42.5]	30.2 [1.2]	240 [9.5]	802 [31.6]	383 [15.1]	2299 [90.5]	1857 [73.1]	2389 [94.0]	274 [10.8]	638 [25.1]
	168		225/70R19.5	787 [31.0]	835 [32.9]	747 [29.4]	2688 [105.8]	179 [7.0]	1079 [42.5]	30.2 [1.2]	240 [9.5]	802 [31.6]	383 [15.1]	2299 [90.5]	1857 [73.1]	2389 [94.0]	274 [10.8]	638 [25.1]
	178		225/70R19.5	787 [31.0]	835 [32.9]	747 [29.4]	2688 [105.8]	179 [7.0]	1079 [42.5]	30.2 [1.2]	240 [9.5]	802 [31.6]	383 [15.1]	2299 [90.5]	1857 [73.1]	2389 [94.0]	274 [10.8]	638 [25.1]
	190		225/70R19.5	787 [31.0]	835 [32.9]	747 [29.4]	2688 [105.8]	179 [7.0]	1079 [42.5]	30.2 [1.2]	240 [9.5]	802 [31.6]	383 [15.1]	2299 [90.5]	1857 [73.1]	2389 [94.0]	274 [10.8]	638 [25.1]
	208		225/70R19.5	787 [31.0]	835 [32.9]	747 [29.4]	2688 [105.8]	179 [7.0]	1079 [42.5]	30.2 [1.2]	240 [9.5]	802 [31.6]	383 [15.1]	2299 [90.5]	1857 [73.1]	2389 [94.0]	274 [10.8]	638 [25.1]
	178	22,000	245/70R19.5	794 [31.3]	848 [33.4]	747 [29.4]	2688 [105.8]	179 [7.0]	1079 [42.5]	30.2 [1.2]	248 [9.8]	810 [31.9]	391 [15.4]	2327 [91.6]	1846 [72.8]	2424 [95.4]	283 [11.1]	638 [25.1]
	252		245/70R19.5	794 [31.3]	848 [33.4]	747 [29.4]	2688 [105.8]	179 [7.0]	1079 [42.5]	30.2 [1.2]	248 [9.8]	810 [31.9]	391 [15.4]	2327 [91.6]	1846 [72.8]	2424 [95.4]	283 [11.1]	638 [25.1]

(1) — The **F** and **R** Height Data represent dimensions from ground to “frame datum line” (top of frame rail) of a base/standard vehicle with no options.
(2) — These dimensions are for reference only. Actual height may vary due to production tolerances.
🟨 = measured in CAD @ Stripped Weight

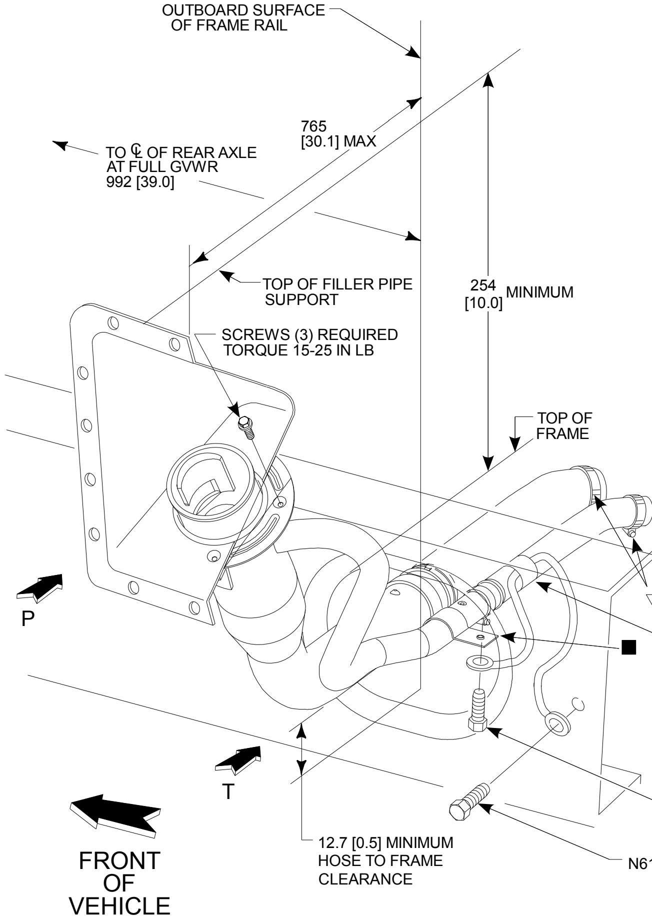
NOTE — [ ] DIMENSIONS ARE INCHES.

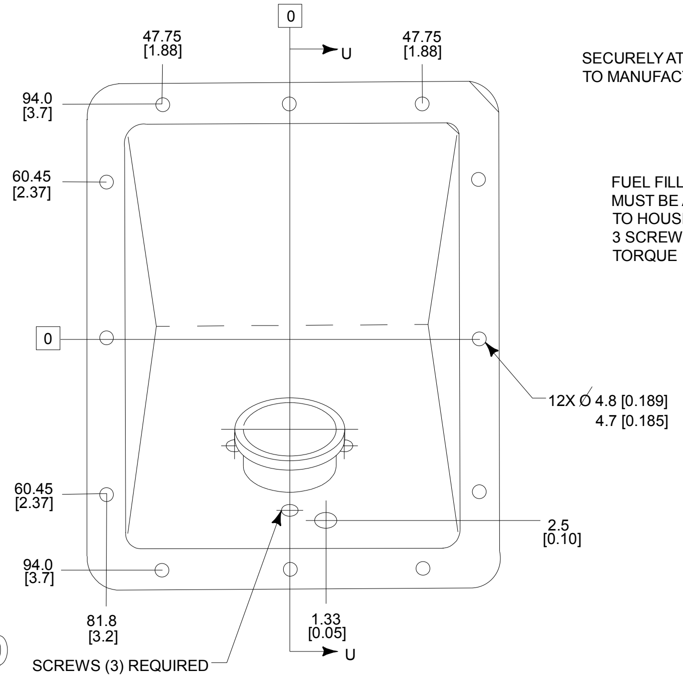
F-59 COMMERCIAL CHASSIS
TEMPORARY SHIPPING COMPONENTS



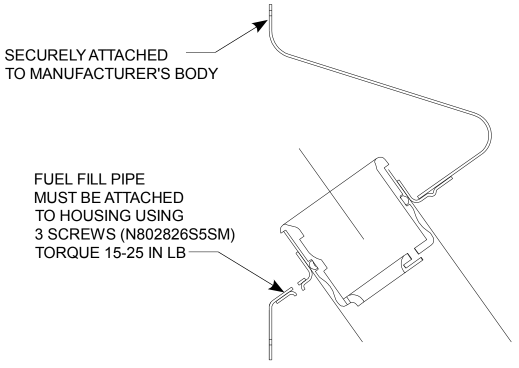
NOTE: Temporary Shipping Components
Remove all temporary covers, brackets and structures prior to vehicle completion.

F-53 MOTORHOME / F-59 COMMERCIAL CHASSIS
FUEL FILLER PIPE

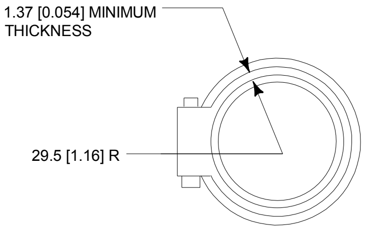

OUTBOARD SURFACE OF FRAME RAIL
TO ℄ OF REAR AXLE AT FULL GVWR 992 [39.0]
765 [30.1] MAX
TOP OF FILLER PIPE SUPPORT
254 [10.0] MINIMUM
SCREWS (3) REQUIRED TORQUE 15-25 IN LB
TOP OF FRAME
P
T
FRONT OF VEHICLE
12.7 [0.5] MINIMUM HOSE TO FRAME CLEARANCE
SECURE WITH TIE STRAPS AS REQUIRED TO VENT HOSE
N611131S36
N611645S36


0
47.75 [1.88]
U
47.75 [1.88]
94.0 [3.7]
60.45 [2.37]
0
12X Ø 4.8 [0.189] 4.7 [0.185]
60.45 [2.37]
2.5 [0.10]
94.0 [3.7]
81.8 [3.2]
1.33 [0.05]
U
SCREWS (3) REQUIRED TORQUE 15-25 IN LB

VIEW P


SECURELY ATTACHED TO MANUFACTURER'S BODY
FUEL FILL PIPE MUST BE ATTACHED TO HOUSING USING 3 SCREWS (N802826S5SM) TORQUE 15-25 IN LB

SECTION U


1.37 [0.054] MINIMUM THICKNESS
29.5 [1.16] R

VIEW T

✳ WORM GEAR DRIVEN HOSE CLAMP STRUCTURAL BRACKET AND BLIND RIVETS ARE NOT PROVIDED BY FORD MOTOR COMPANY

● DIMENSIONS USING HOSE AS SUPPLIED BY FORD MOTOR COMPANY

▽ WORM GEAR DRIVEN HOSE CLAMPS TORQUE 2.8 - 4.0 NEWTON METERS (25 - 35 IN LBS)

■ WORM GEAR DRIVEN HOSE CLAMP ✳ MUST FIT SECURELY OVER A 57.2 (2.25) O.D. FILL PIPE AND SECOND STAGE VEHICLE MANUFACTURERS BRACKET ✳

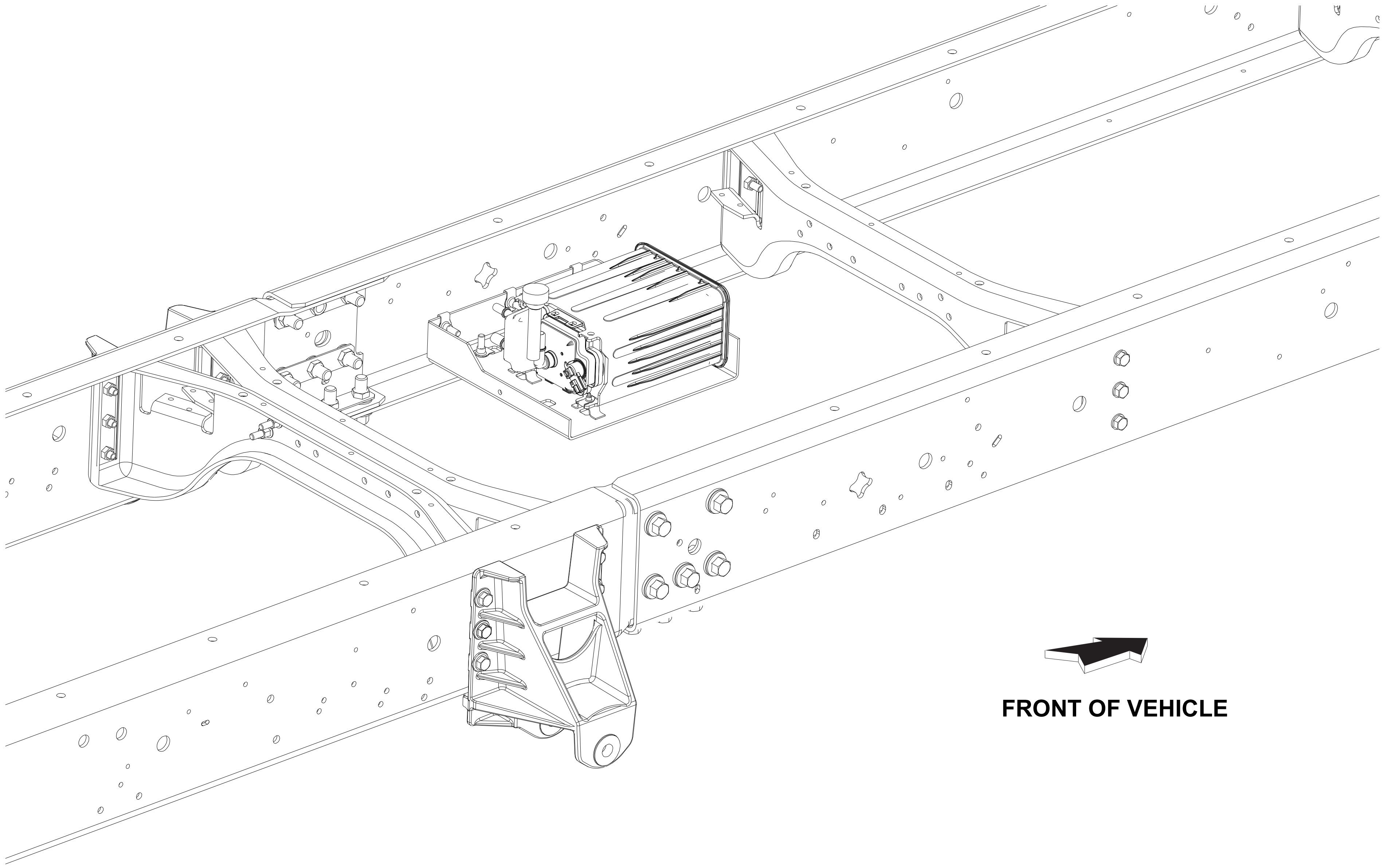
NOTE: MAKE SURE THE FILLER NECK SUPPORT IS INSTALLED PROPERLY AS PER THE NOTE IN THIS SECTION.

▽ CRITICAL CONTROL ITEM

WARNING:
It is mandatory to use the supplied rubber hose for installing the fuel pipe. Any increase in length or change in material of the supplied rubber hose will result in voiding the evaporate emissions certification.

NOTE — [ ] DIMENSIONS ARE INCHES.

F-53 MOTORHOME / F-59 COMMERCIAL CHASSIS
EVAPORATIVE EMISSIONS
EVAP CANISTER



F-53 MOTORHOME / F-59 COMMERCIAL CHASSIS BODY & SPECIAL EQUIPMENT INSTALLATION RECOMMENDATIONS

GENERAL NOTES

1. Adherence to the following suggestions and warnings should not be construed as implying compliance with any particular U.S. or Canadian regulation. See the Incomplete Vehicle Manual (IVM) for specific information regarding compliance with U.S. or Canadian regulations.

2. The weight of the basic vehicle plus the sum of the weights of:
   (a) additions to the basic vehicle (body and equipment),
   (b) other cargo,
   (c) fuel sufficient to fill all tanks, and
   (d) the maximum number of occupants (at 150 lb per occupant)

   must not exceed the GVWR of the vehicle as specified on the Incomplete Vehicle Label attached to the IVM and must be distributed so that neither the front nor rear GAWR (as specified on the Incomplete Vehicle Label) is exceeded. Also see the IVM for further instructions. All heavy equipment installed by the body builder should be placed as close to the floor as practical to maintain a minimum vertical center of gravity. Side-to-side loading should be as symmetrical as possible about the vehicle longitudinal centerline to prevent vehicle lean and adverse steering and braking characteristics.
3. Rear departure angle of 8.1° minimum for the motorhome chassis should be maintained to protect the fuel tank at GVWR. Rear bumpers or underbody skids should be considered to minimize interference to ground.
4. All subsequent manufacturer-installed items must be at least 3/4 inch away from fuel tank(s), rotating driveline components, and all other moving components. Also, they must be clear of all axle total movements.
5. HOSE / WIRE ROUTING – Any change to the factory routing or addition of wire bundles / hoses / lines must be done in such a way as to provide adequate clearance to allow components to move without contacting each other. Routing clips and other aids should be used to keep components from rubbing / chaffing.
6. EMISSIONS CONTROLS – See the Incomplete Vehicle Manual.
7. NOISE REGULATIONS – See the Incomplete Vehicle Manual.
8. SAFETY CERTIFICATION INFORMATION – See the Incomplete Vehicle Manual.

BODY

1. Any structural member removed from the body or cowl assembly areas, except for the dunnage box supports, must be replaced or included in the body structure of any special body installed.
2. It is mandatory that the body builder establish a structurally sound combination of body and vehicle structure by securely fastening together the body and the frame. This requires a rigid body design and a thoroughly planned system of bolts, welds and other fastenings between the frame and body.
3. To ensure structural integrity is maintained, the vehicle's front structure must not be modified.To avoid interference problems with suspension components, body attachments to frame should not protrude below side member flange.
4. An access panel may be provided in the vehicle floor by the body builder to service the in-tank fuel pump.
5. The body builder should consider the addition of sound insulation to minimize engine and fan noise in the driver compartment.

BRAKE COMPONENTS:

WARNING: Brake Line Damage or Corrosion

Do not wrap brake lines with any material that could cause water, dirt, sand or other foreign material to accumulate around the lines, which could potentially result in brake line damage or corrosion.

2016MY F53/59 stripped chassis have a new park brake system design. When the system needs to be disconnected or serviced in any way, the park brake actuator must have the tension removed. This is a self-adjusting actuator that will not function properly if it is not pinned prior to being disconnected. See details in SVE Bulletin Q-237 on the BBAS website at www.fleet.ford.com/truckbbas under the "Bulletins" tab.

FRAME

1. 2-PIECE FRAME – piece frame. The bolt together joint is located just ahead of the forward rear spring hanger on all models/GVWR's.
   - The two frame sections are assembled by fixture at the assembly plant and are not intended to be adjusted in service.
   - The fasteners are not re-useable. If the bolts are removed, both the bolts and nut plates must be replaced.
   - The bolts are torqued to 350 Nm +/- 50 [258 ft lb +/- 37]
   - For measuring frame straightness, refer to the F-53/F-59 Workshop Manual.
   - The 24/26K GVWR frame utilizes 50,000 psi high-strength steel.
   - For high-strength steel welding recommendations, refer to QVM Bulletin Q-140.
2. FRAME WEB – holes to mount brackets, outriggers, and supports may be drilled in the vertical side rail web with the following restrictions:
   - Material between edge of hole and inside of upper or lower flange must be at least 1.50 inch.
   - Minimum edge distance between any two holes must be at least twice the diameter of the largest hole.
   - Holes must be no larger than 0.75 inch in diameter. Avoid close vertical succession of fasteners.
   - All attaching fasteners, including flat washers,must be of high strength steel (Grade 8 or metric equivalent).
3. FRAME FLANGE – holes may be drilled in the horizontal frame flanges with the following restrictions:
   - Material between edge of hole and radius/edge of flange must be at least 1.0 inch.
   - Minimum edge distance between any two holes must be at least twice the diameter of the largest hole.
   - Holes must be no larger than 0.5 inch in diameter.
4. Welding to the vertical side web is preferred. Welding is not recommended on frame flanges or bend radii, however, a series of tack welds is allowed on frame flanges, e.g., to attach heat shields. Tack welds must be no greater than 0.4 inches in diameter and they must be at least 1.5 times the weld diameter away from both the edge of the frame and the radius bend tangent line.
5. The frame for the F-53 / F-59 chassis is designed to permit removal of the engine and transmission out-the-bottom. This is facilitated by bolt-in No. 2 and No.3 crossmembers. Body builders should not add permanent structures which preclude powertrain removal.

ENGINE

1. Engine compartments must be designed to eliminate any air circulation restriction that would affect the air induction and cooling systems. F-53 / F-59 engine compartments must provide adequate flow-through ventilation to prevent local temperatures from exceeding recommended maximums. Limits for critical engine components are shown in the table (see Cooling) on next page.
2. No modification of the air cleaner inlet duct is permissible. Removal or modification of this duct will affect function of the mass air meter, possibly causing driveability problems and increased tailpipe emissions.
3. The air induction inlet should not be closed off from fresh air; underhood air should not be the primary source of air into the inlet. Fresh dry air should be provided to the air box inlet. This can be accomplished in various manners, such as, providing a vent opening in the front of the vehicle, closing off the engine compartment to prevent recirculation of underhood air, and/or ducting of air from grill opening to inlet.

SUSPENSION AND STEERING

1. No vehicle or component alterations are allowed which restrict or prevent steering wheel, column, intermediate shaft, or coupling assembly collapse/stroke travel during crash.
2. Relocating the power steering fluid reservoir is not recommended. If the reservoir is moved, care must be taken to ensure that the power steering hoses are not kinked; hoses should have generous radii. Keep the reservoir upright in a vertical position while in the process of relocating it to ensure that no air enters the system.
3. If the suspension spacers are used between the spring and axle seats to accommodate side-to-side variations, they should not exceed 0.75 inch. Addition of spacers is not covered under warranty.

TRANSMISSION

1. Transmission components are sensitive to ambient temperatures. Underbody ventilation is critical and temperatures in specific areas should not exceed those listed in the table (see Cooling) on the next page.
2. TorqShift® wire harness routing location, wire harness locating clips, all heat shielding, and minimum clearance to the exhaust must be maintained as installed from the assembly plant. Failure to maintain minimum clearances may result in heat damage to the wiring, assembly and loss of transmission controls.
3. It is mandatory that the shift linkage be readjusted after linkage repair, engine mount replacement or shimming, steering column replacement or repositioning, transmission replacement, or any repair which could change the linkage adjustment.

WHEELS AND TIRES

1. Use only wheels with the same load capacity, rim width, rim offset, and mounting configuration as those originally installed on the vehicle. Consult an authorized Ford Dealer for correct wheel load capacity, size, and usage. Wheels used must conform to the F/CMVSS 120. The use of any wheel or tire, other than those originally installed on the vehicle as manufactured by Ford Motor Company, may adversely affect load carrying capacity, handling, bearing life, ride, braking performance, speedometer/odometer accuracy, automatic transmission shift timing, and tire/wheel clearance of the body and chassis.

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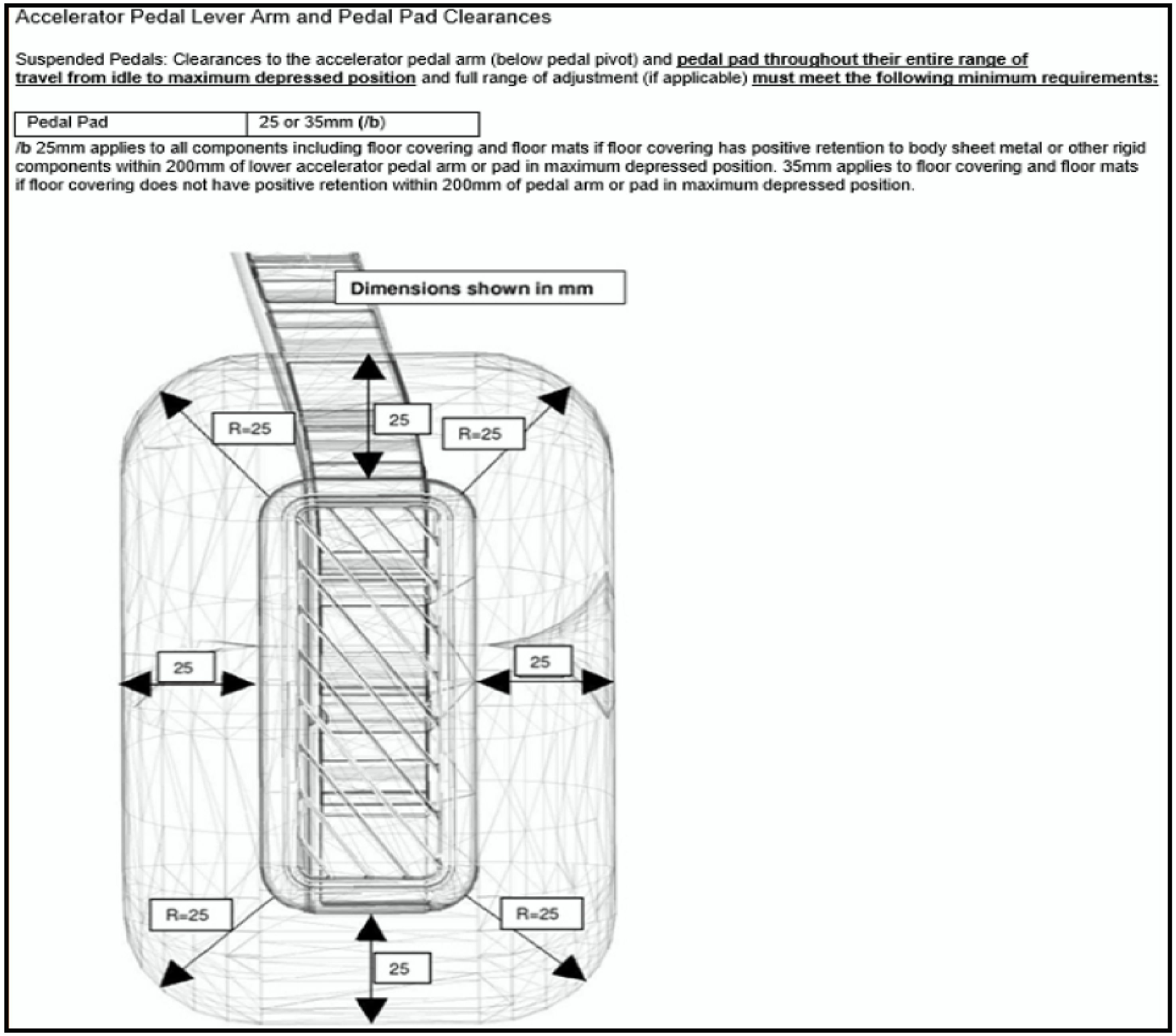


Accelerator Pedal Lever Arm and Pedal Pad Clearances

Suspended Pedals: Clearances to the accelerator pedal arm (below pedal pivot) and pedal pad throughout their entire range of travel from idle to maximum depressed position and full range of adjustment (if applicable) must meet the following minimum requirements:

Pedal Pad	25 or 35mm (/b)

/b 25mm applies to all components including floor covering and floor mats if floor covering has positive retention to body sheet metal or other rigid components within 200mm of lower accelerator pedal arm or pad in maximum depressed position. 35mm applies to floor covering and floor mats if floor covering does not have positive retention within 200mm of pedal arm or pad in maximum depressed position.

(Cont'd next page)

F-53 MOTORHOME / F-59 COMMERCIAL CHASSIS
BODY & SPECIAL EQUIPMENT INSTALLATION RECOMMENDATIONS (Cont'd)

WHEELS AND TIRES (Cont'd)

2. Use only tires with the equivalent load-carrying capacity as those originally installed on the vehicle. Use only tires of a type and size that are on the vehicle certification label. Do not over or under inflate tires, always maintain tire pressure identified on certification label. Never mix radial, bias-belted,or conventional bias type tires, and avoid mixing P and LT metric tires with alphanumeric tires whenever possible. Consult an authorized Ford Dealer for correct tire load capacity, type, size, and inflation pressure for the vehicle. Tires used must conform to FMVSS 119 (non-passenger car type tires) in the United States, or to the Motor Vehicle Tire Safety Regulations in Canada.

COOLING

NOTE: Refer also to “Design Recommendations - Cooling System” section.

1. Cooling inlet area revisions (grille, bumper slots, etc.) must not significantly alter air flow and should be free from blockage such as spare tires, added brackets, etc. Restricted air flow can result in possible engine damage for which the installer maybe held liable, should any claims arise.
2. A minimum frontal grille opening of 370 square inches is required to provide satisfactory engine cooling. The grille opening should be directly in front of the radiator or ducted in such a manner to direct airflow through the radiator core. Battery(s) or other components should not be mounted in front of the radiator or impede airflow through the radiator.
3. Engine and Automatic Transmission temperatures may be affected by completed front-end design. Component temperature limitations should not be exceeded (See table below).

F-53 and F-59 STRIPPED CHASSIS MAXIMUM ALLOWABLE COMPONENT TEMPERATURE

Components	Temperature
Fuel Rails / Pressure Regulator	200 F
Engine Ignition Sensors	250 F
EEC Module	175 F
Fuel Pump Delivery Module	167 F
Auto Transmission Sensors	250 F
Lower Transmission Area (mounts, gaskets, etc.)	250 F

NOTE: Use only Ford Factory Coolers / Heat Exchangers

EXHAUST

1. Any changes to the existing exhaust pipe length should be accomplished by welding or use of 3/8 inch U-bolt. Pipe added to the exhaust outlet must be of 0.053 inch minimum wall thickness. Extending the outlet pipe 10 inches or more requires an additional support bracket of a type similar to those provided with the original chassis.

WARNING: Tailpipe Outlet Configuration

It is mandatory that the side tailpipe outlet configuration be retained, when any modification is made to the exhaust system, to reduce the possibility of exhaust fume entry through rear openings. The outlet should not be located near any vent, window, door or body opening. The tailpipe or attenuator of any modified system should be above the departure angle of the finished vehicle.

The proper torque sequence and torque values are to be followed as described below for tailpipe extension:

1. Place U-bolt (GU94-5221-AA) over the extension pipe (GU94-5263-AA), at the end which secures to the tailpipe (GU94-5H211-AD).
2. Place the extension pipe over the tailpipe pipe until fully seated.
3. Orient tailpipe as needed to comply with “Tailpipe Outlet Configuration”
4. Place the U-Bolt 17mm to 19mm from the end of the extension pipe and tighten the first bolt until the clamp/U-Bolt is snug against the extension pipe.
5. Torque the nut that was not already run down to 55Nm +/-5Nm.
6. Torque the first nut to 55Nm +/-5Nm.

2. Do not remove, reposition, or otherwise modify any existing OEM chassis or exhaust mounted heat shielding. These shields are there to ensure heat protection from underbody components as well as occupant comfort. Changes in the exhaust pipe length should be accompanied by a similar lengthening of the heat shielding where it exists. Additional underbody heat shielding is required to be installed by the builder as specified in the Ford Truck Quality Program Guidelines binder.

FUEL SYSTEM - LEV II COMPLIANT

1. The fuel tank for the F-53 / F-59 chassis is located between the frame rails aft of the rear axle, and is supported by straps and frame crossmembers. The body builder should consider skid plates or protective bars if the body structure does not adequately protect the lower and rear surfaces of the tank.
2. Avoid relocating fuel tanks. Relocated fuel tanks must meet FMVSS requirements. Use torque specifications and controls for reinstalling tanks (refer to service manual).
   - To avoid electrical sparking at tank, disconnect the battery ground cable(s) from the vehicle battery(ies) before removing tank.
   - Fuel tank clearance to body or frame components is 0.75 inches minimum. The size of any flexible body mounts must not be considered as part of this clearance.
   - Suspension components must clear the fuel tank by 2.00 inches minimum through their functional geometry.
   - Unfriendly surfaces by fuel tanks are unacceptable (i.e., any fastener used to install back-up alarm, seats, etc., to floor or chassis components must not point toward fuel tank).
   - Revisions and welding to fuel filler pipes, filler necks and tanks must be avoided. Prior to welding in the vicinity of the fuel system, verify no fuel is dripping from disconnected components, thoroughly clean up any fuel drips/spills, protect any fuel system component in the vicinity (including evaporative emissions components) or remove the system components (including fuel tank) from the vehicle.
   - When removing tanks for processing, tanks should be stored where protected and caps should be installed on all openings. Dirt/dust will plug fuel filters and could result in engine damage.
   - Reinstallation of fuel sender units always requires a new gasket (fastener torque of 85-115 in-lb is specified).
   - Auxiliary generator systems that are installed with their own fuel supply, or with a fuel supply provided by means other than using the tank auxiliary port, must meet FMVSS requirements.
   - Tapping into fuel tanks for an extra fuel source is unacceptable.

   A fuel filler kit is provided with the F-Super Duty F-53 / F-59 Stripped Chassis. This filler kit is installed and then tested on a representative chassis to verify that it is capable of providing acceptable fuel fill function without spray, spitback or premature shutoff. However, Ford Motor Company has no control over how the filler pipe and vent line are installed or modified by the Vehicle Modifier. Consequently, the Vehicle Modifier must ensure that the fuel filler pipe and any extensions added to the fill or vent lines are adequately supported to prevent sagging that could cause spray, spitback or premature shutoff during normal fueling operations. The Final Stage Manufacturer is responsible for verifying acceptable fuel fill function on the completed vehicle.
3. Fuel filler and vent hoses must not be exposed to sharp corners and should have a minimum of 1.00 inch clearance to the body and surrounding body and chassis components (except frame). If fuel filler hoses are in the vicinity of edges or corners, then shield/abrasion protection should be used. Sink traps (low spots in fuel filler and/or vent hose) are unacceptable. Lengthening/relocating the fuel filler pipe can only be done with the hoses supplied in the dunnage box and steel tube provided by the body builder. No substitute hose material is allowed. Total length of the hose used in the system cannot exceed that of the original hose supplied in the dunnage box. The short shipping hoses provided on the chassis, as received, is for shipment only and should not be used in the final assembly of the fuel filler pipe. Failure to comply may void the evaporative emissions certification.
   - If fuel hoses or vent hoses are replaced, the new hoses must meet Ford Engineering specifications.
   - Extra connections in the fuel filler hose or vent hose, caused by the use of extensions, should be avoided.
   - Use only the Ford-specified fuel cap. Caps other than the Ford original (such as aftermarket locking gas caps) are unacceptable.
4. Splicing of fuel lines with clamps and rubber hoses is unacceptable. When drilling or welding in areas where there are fuel or vapor lines, the lines should be removed. Bolts installed into the chassis near fuel/vapor lines should have protective caps or other means of protection for the lines. Kinking or collapsing of fuel or vapor lines, while handling or after installation, is unacceptable. If line has been kinked, it must be replaced. If carbon canisters are relocated:
   - Heat shields should be added if they are located in the vicinity of the catalyst and/or muffler.
   - No additional hose can be added to the canister purge lines. Lengthening of the system can only be accomplished by replacing one or more of the steel tubes with a longer tube. The number of joints and length of hose in the system cannot be increased. If any of the hose is damaged, it must be replaced with CADBAR II low permeability hose meeting Ford Engineering Specification ESA-M2D50-B. Failure to comply may void the evaporative emissions certification.
   - Fastener torque specs are 14 to 22 ft-lb for remounting of canister brackets to frame.

   Avoid routing of fuel or vapor lines near any sharp edges or corners. Protect lines if near any sharp edges or corners.

FRONT AXLE

No drilling or welding to the front axle “I” beam is permissible. Special equipment mounting or attaching brackets, requiring attachment to the front axle, may be clamped to axle “I” beam only.

(Cont'd next page)

F-53 MOTORHOME / F-59 COMMERCIAL CHASSIS
BODY & SPECIAL EQUIPMENT INSTALLATION RECOMMENDATIONS (Cont'd)

ELECTRICAL

Although there are many points in the electrical system to connect additional circuits, certain connection points provided are recommended for reliability and convenience. This section defines the recommended connection points for the F-Super Duty Class A Motorhome (F-53) & Commercial Chassis (F-59) and the maximum allowable electrical loads.

- **CAUTION:** Improper electrical tie-ins may affect vehicle operation (i.e., engine, transmission).

Alternative connections or wiring practices are not recommended as certain modifications may result in other circuits becoming non-functional. Disconnect the battery negative (ground) cable and remove it from the battery carrier prior to any vehicle modification. Upon completion of body or equipment installation, all wiring should be checked for proper routing, etc., to preclude electrical shorts upon re-installation of the battery negative cable. The vehicle wiring and protection were designed for the following lighting loads - additional loads to any circuit must be installed in accordance with the detailed electrical wiring instructions provided later in this book.

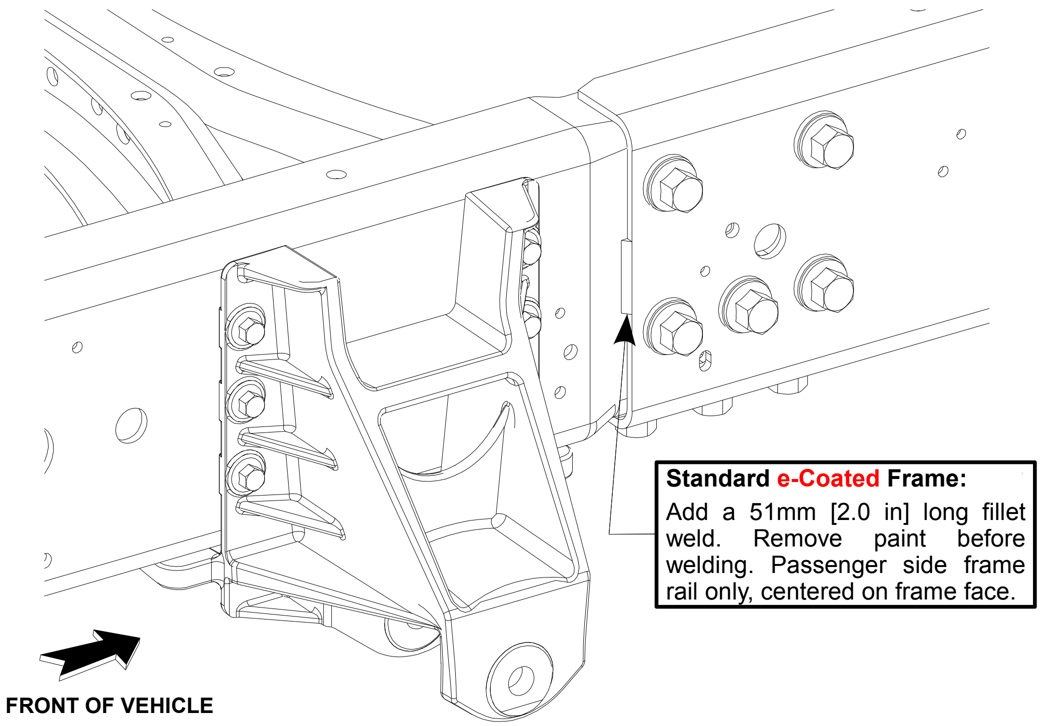
NOTE: When chassis wheelbases are lengthened, the body builder must maintain the original slack length in the wire harness leads that are affected by suspension movement (jounce & rebound).

Qty	Components	Trade No.
2	Halogen Headlamp Bulbs	9004
10	Combination Rear Lamp Bulbs (tail, brake, turn signal)	1157
2	Back-up Lamps	1156
4	Side Marker Bulbs	194
2	License Plate Illumination Bulbs	194
2	Interior Dome Bulb	561
 16 5	Instrument Cluster Bulbs - Small Bulb - Large Bulb	 37 194

WARNING: Electrical Grounding Requirement

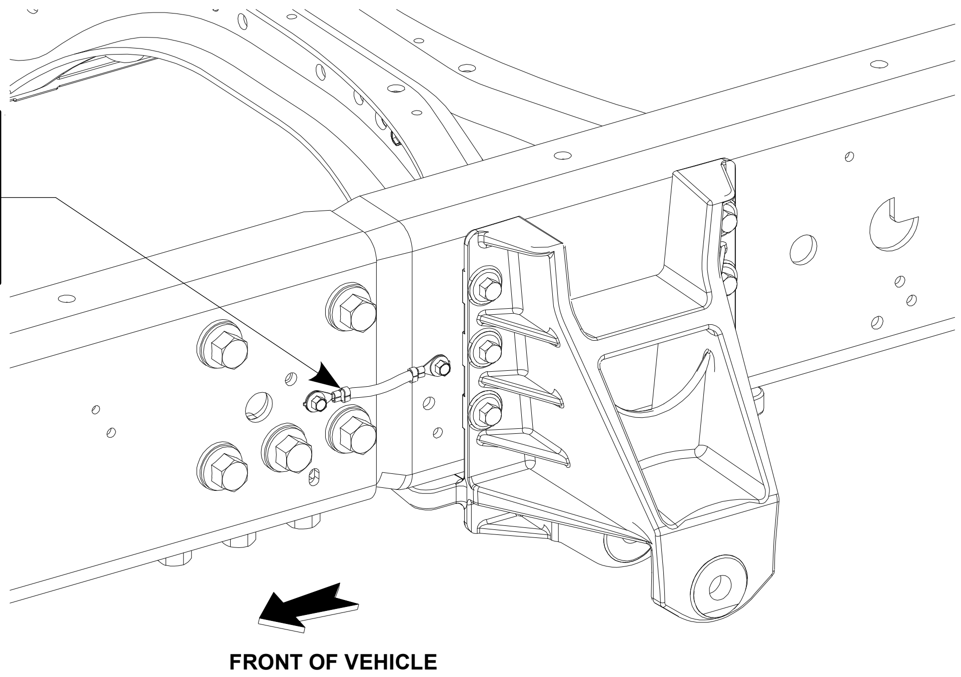
The two-piece **e-coated** frame rail design on the F-53 Motorhome and F-59 Commercial Chassis requires a welded ground path be provided from the rear of the vehicle. Failure to maintain this ground path may interfere with the proper operation of any circuits grounded to the rear of the frame. It is recommended that a 51mm [2.0 in] long fillet weld be applied as shown to maintain this connection.

The optional two-piece **galvanized** frame rail design on the F-59 Commercial Chassis includes an attached ground strap across the frame joint. The ground strap provides an electrical path to the rear of the vehicle frame – no additional fillet weld is needed.



Standard e-Coated Frame:
Add a 51mm [2.0 in] long fillet weld. Remove paint before welding. Passenger side frame rail only, centered on frame face.

Optional Two-Piece Galvanized Frame:
The optional two-piece galvanized F-59 Commercial Chassis includes an attached ground strap across the frame joint on the driver side frame rail only. The ground strap provides an electrical path to the rear of the vehicle frame – no additional fillet weld is needed.



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F-53 MOTORHOME / F-59 COMMERCIAL CHASSIS
BODY & SPECIAL EQUIPMENT INSTALLATION RECOMMENDATIONS (Cont'd)

ELECTRICAL COMPONENTS:

LIGHTS CONTROLLED BY HEADLAMP SWITCH

The headlamp switch on the F-Super Duty Class A Motorhome Chassis (F-53) utilizes one 20 amp fuse for the headlamp high beam circuit and two 10 amp fuses for low beam.

NOTE: Do not add marker lamps to the headlamp circuit; a separate circuit is provided for the marker lamps. Adding the marker lamps to the headlamp circuit can result in an overload of the circuit. For full service temperature range, the headlamp switch load should not exceed 15 amps.

Wiring access for lights to be controlled by the headlamp switch are provided at the front of the dash panel and at the rear of the vehicle, and are identified by tags attached to these wires.

Splices and electrical loading (fusing and wire size requirements) of these circuits must be in accordance with general practices previously identified.

LIGHTS CONTROLLED BY STOP LAMP SWITCH AND TURN INDICATOR SWITCH

NOTE: Splicing into the stop lamp switch on vehicles with TorqueShift® transmissions can interfere with the proper functioning of the PCM and speed control. This can:

- Affect engine idle speed quality
- Affect torque converter operation
- Prevent the speed control from disengaging upon braking

If your application involves splicing into the stop lamp switch of a TorqueShift® equipped vehicle, please contact the Body Builders Advisory Service at http://www.fleet.ford.com/truckbbas.

The F-Super Duty Class A Motorhome Chassis (F-53) has a mechanical stop lamp switch mounted on the brake pedal arm. These switches and associated wiring are designed for a maximum load of 10.5 amps, which is less than the fuse in the circuit, but ample for normal stop lamp loads. Under no circumstances are total loads in excess of this value permissible.

If only turn signal function is desired for the added lights, splice into the taillamp loom located at the rear of the vehicle. Splice into wires tagged “RH turn signal only” or “LH turn signal only.” If both the turn signal and stop lamp function are desired for the added lights, splice into the taillamp loom at the rear of the vehicle into wires tagged “RH turn w/brake” and “LH turn w/brake.”

NOTE: The turn signal switch used on light trucks has a maximum rated current of 6.5 amps for right and left turning functions and 10 amps for stop lamp function. Do not exceed these values on the turn signals.

The turn signal and emergency flasher system on the F-Super Duty Class A Motorhome Chassis (F-53) utilizes an electronic flasher. For the turn signal function, the electronic flasher is designed to accommodate five 2.1 amp lights and for the emergency flasher function, it is designed to accommodate ten 2.1 amp lights for combination stop/turn and trailer lamps.

NOTE: Adding more lights than what is specified above can result in reduced life and performance of the flasher.

ADDED LIGHTS OR ACCESSORIES CONTROLLED BY ADDED SWITCHES

The added electrical switches and wiring must have sufficient electrical capacity for the accessory load and must be protected by appropriate fuses or circuit breakers. Also, added current draw must not cause total loads to exceed capabilities of the base vehicle wiring.

State, provincial and local laws may regulate the manner in which the fog and driving lamps are used, or may require additional equipment for the particular use intended for the vehicle. It is the buyer’s/owner’s responsibility to determine the applicability of such laws to the buyer’s/owner’s intended use for the vehicle and to arrange for the installation of required equipment.

When horns are installed, the location must be as high as possible with bell mouth of horn pointed downward.

WATER MANAGEMENT WITHIN THE ENGINE COMPARTMENT

In order to protect components within the engine compartment from water intrusion damage to engine components and the vehicle's electrical system, it is necessary that the finished vehicle meet the following performance standard:

- When the finished vehicle is parked on a level surface in a heavy rainfall (2.0L/min/m0) [0.5G/min/10ft0], with windshield wipers OFF and HVAC OFF, there shall be no leakage and/or drainage into the engine compartment with the hood/bonnet closed.
- The windshield to hood interface should be sealed to prevent water from the windshield from entering the engine compartment.
- Splash shields from the frame to body (wheel well) will need to be installed to prevent water from the tires from quenching the exhaust manifolds.

BATTERIES AND VOLTAGE REGULATOR

The battery location must be adequately ventilated, accessible for servicing, protected from road splash, and must also incorporate a shockless mounting.

The coach or chassis battery must not be located under the air cleaner inlet to prevent ingesting any gas that may be emitted from the battery.

Batteries should not be mounted in front of the radiator or impede air flow through the radiator.

If the original equipment battery is replace by more than one battery, or a battery of a larger capacity, the battery charging power supply circuit must be checked and revised to carry the additional loads.

F-Super Duty Class A Motorhome Chassis (F-53) has a separate wire to maintain “Keep Alive Power”; the addition of a battery cut-off switch must not affect the operation of this circuit.

The electronic voltage regulator base must always be connected to the battery, engine chassis ground when the ignition switch is in either the ON or START position. The voltage regulator will be damaged if the connection does not exist when the ignition switch is energized.

WIPER DELAY MODULE

The Wiper Delay Module on the F-Super Duty Class A Motorhome Chassis (F-53) is not internally protected for a continuous high current load greater than 9 amps and must be protected via a properly sized circuit breaker. The existing 30 amp Wiper/Washer Module & Wiper Feed fuse in the fuse panel is sized for the maximum allowable in-rush current and does not provide appropriate protection to the Wiper Delay Module. The Wiper Delay Module must use a relay to control power to the wiper motor.

A/C PREP PACKAGE

The F-Super Duty Class A Motorhome Chassis (F-53) comes standard with an R134a (non-CFC) air conditioning prep package (optional on the F-59 Commercial Chassis) for use with a thermostatic expansion valve (TXV) controlled A/C system. This package consists of a compressor, condenser, high side lines with high pressure switch, air recirculation baffles, and front end accessory drive which are mounted to the chassis, and a receiver/dryer with low pressure cutoff switch.

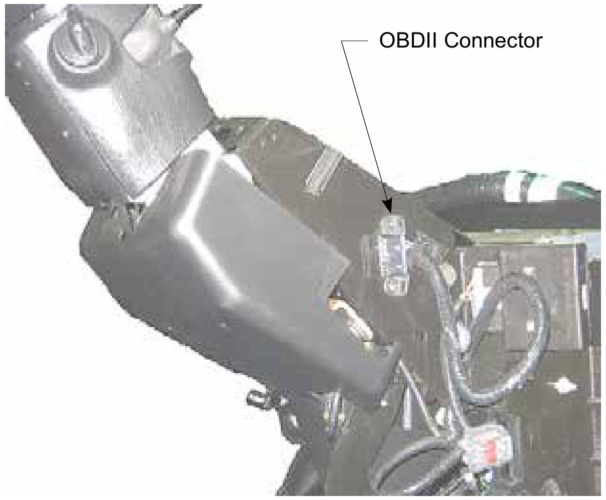
NOTE: The A/C suction line used on this system will will be changing for the 2016 model year. This A/C suction line must be separately ordered to properly complete the A/C system on both F-53 and F-59 stripped chassis vehicles. For additional information, see SVE Bulletin Q-233 on the BBAS website at www.fleet.ford.com/truckbbas under the “Bulletins” tab.

OUTSIDE AIR TEMPERATURE PROBE

An outside air temperature probe is provided in dunnage for installation by the final stage manufacturer. The probe provides data to the instrument panel's message center. The probe should be mounted in the path of outside ambient airflow in order to provide appropriate data to the message center.

OBDII DIAGNOSTIC CONNECTOR LOCATION

The OBDII diagnostic service port connector is attached to the right hand side of the steering column support during chassis assembly. This is intended to be a "temporary shipping location". It is the responsibility of the body builder to relocate the OBDII diagnostic connector to the bottom of the dash panel (not supplied by Ford). For additional information, see SVE Bulletin Q-178 on the BBAS website at www.fleet.ford.com/truckbbas under the “Bulletins” tab.



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F-53 MOTORHOME / F-59 COMMERCIAL CHASSIS
BODY & SPECIAL EQUIPMENT INSTALLATION RECOMMENDATIONS (Cont'd)

CHASSIS WIRING CIRCUITS

Circuit	Circuit #	Gauge	Color	Location	Fuse Location	Fuse Size
• Accessory Feed (Accy's & Run)	296	18	White-Purple	Top Side of Dash Panel (Part of 14A318)	F/P #5	10A
• Accessory Feed (Off & Run)	294	18	White-Lt. Blue	Top Side of Dash Panel (Part of 14A318)	F/P #38	10A
• A/C Switch	441	16	Red-Yellow	Top Side of Dash Panel (Part of 14A318)	—	—
• Backup Lamp	140	18	Black-Pink	Rear of Vehicle (Part of 14408)	F/P #33	10A
• Battery Feed	1049	16	Brown-Pink	Top Side of Dash Panel (Part of 14A318)	F/P #16	20A
• Blower Motor Feed	181	10	Brown-Orange	Top Side of Dash Panel (Part of 14401)	PDB #23	40A
• Brake Lamp Feeds	511	18	Lt. Green	Top Side of Dash Panel (Part of 14A318), Front Side of Dash Panel (Part of 14A348) -and Rear of Vehicle (Part of 14408)	F/P #8	10A
• Cigarette Lighter Feed	40	14	Lt. Blue-White	Top Side of Dash Panel (Part of 14A318)	PDB #22	20A
• Electric Brake Power	43	12	Dark Blue	Rear of Vehicle (Part of 14408)	PDB #13	30A
• Fuel Pump Delivery Module Relay	1059	14	Lt. Blue-Orange	Power Distribution Box Relay #2	PDB #21	20A
• Ground During Start	41	20	Black-Lt. Blue	Top Side of Dash Panel (Part of 14A318)	—	—
• Headlamp High Beam Feed	12	16	Lt. Green-Black	Front Side of Dash Panel (Part of 14290)	F/P #35	20A
• Headlamp Low Beam Feed (Left) (Right)	160 161	18 18	Dark Brown and White Dark Green-Orange	Front Left Side of Dash Panel (Part of 14290) Front Right Side of Dash Panel (Part of 14290)	F/P #31 F/P #25	10A 10A
• Horn Feed	6	16	Yellow-Lt. Green	Front Side of Dash Panel (Part of 14290)	PDB #17	20A
• Instrument Panel Lamp Feed	19	20	Lt. Blue-Red	Top Side of Dash Panel (Part of 14A318)	F/P #41	10A
• Interior Lamp Feed	53	18	Black-Lt. Blue	Top Side of Dash Panel (Part of 14A318) and Rear of Vehicle (Part of 14408)	—	—
• Interior Lamp Feed (Ground)	402	20	Orange-Lt. Green	(Part of 14A318)	—	—
• LH Turn Signal (only) Feed	380	16	Pink-Yellow	Front Side of Dash Panel (Part of 14290) and Rear of Vehicle (Part of 14408)	F/P #15	15A
• LH Turn w/Brake Signal Feed (Turn)	9	16	Lt. Green-Orange	Rear of Vehicle (Part of 14408)	F/P #1	20A
• Marker Lamp Feed (Park Lamp)	14 14 14 14 14	16 16 16 16 16	Brown Brown Brown Brown Brown	Front Side of Dash Panel (Part of 14290) Front Side of Dash Panel (Part of 14A348) Top Side of Dash Panel (Part of 14A318) Middle of Vehicle (Part of 14405) Rear of Vehicle (Part of 14408)	PDB #6	20A
• Park Brake Switch (Ground)	162	20	Lt. Green-Red	Top Side of Dash Panel (Part of 14A318)	—	—
• Radio Feed	137	18	Yellow-Black	Top Side of Dash Panel (Part of 14A318)	F/P #17	5A
• RH Turn Signal (only) Feed	379	16	Brown-White	Front Side of Dash Panel (Part of 14290) and Rear of Vehicle (Part of 14408)	F/P #21	15A
• Climate Control Customer Demand Switch	877	16	White-Orange	(Part of 14A318)	PDB #18	20A

(Table Continued Next Page)

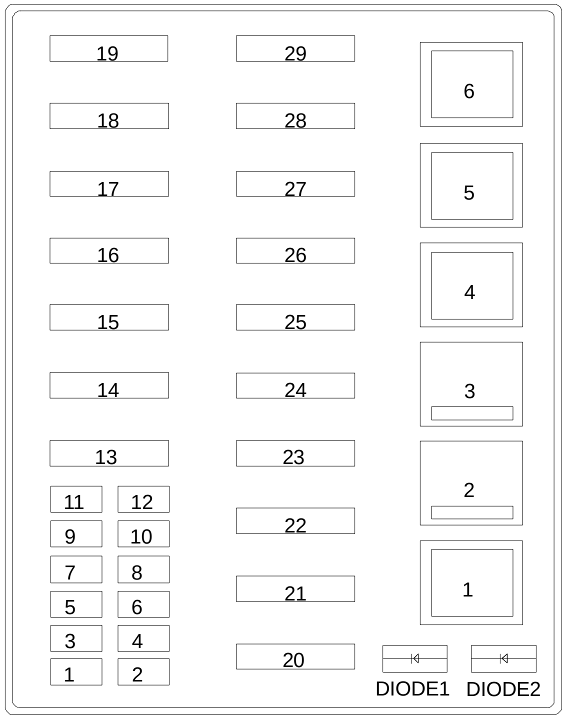
NOTES — 14A032, 14A318, 17B587, 14408, 13A840, and 18A840 wire harness assemblies are provided in dunnage box.
Fuse panel (F/P) is located on 14A032-A wire harness provided in dunnage box.
Power Distribution Box (PDB) is located on 12A581 wire harness assembly located in engine compartment.
Refer to Owners Guide for a complete list of fuse and relay circuits/components.

(Cont'd next page)

F-53 MOTORHOME / F-59 COMMERCIAL CHASSIS
BODY & SPECIAL EQUIPMENT INSTALLATION RECOMMENDATIONS (Cont'd)

CHASSIS WIRING CIRCUITS (Cont'd)

Circuit	Circuit #	Gauge	Color	Location	Fuse Location	Fuse Size
• Blower Motor Relay Ground	753	18	Yellow-Red	Top Side of Dash Panel (Part of 14401)	—	—
• Electric Brake Controller	50	12	Red	Front Side of Dash (Part of 14A348)	PDB #13	30A
• Electric Brake Ground	206	10	White	Front Side of Dash (Part of 14A348)	—	—
• Hot During Start	113	10	Yellow-Lt. Blue	Top Side of Dash Panel (Part of 14401)	PDB #28	30A
• LH Turn w/Brake Signal Feed (Turn/Brake)	9	16	Lt. Green-Orange	Rear of Vehicle (Part of 14408)	F/P #1	20A
• RH Turn w/Brake Signal Feed (Turn/Brake)	5	16	Orange-Lt. Blue	Rear of Vehicle (Part of 14408)	F/P #1	20A
• Tach Output Clean	76	20	Lt. Green-White	Top Side of Dash Panel (Part of 14401)	—	—
• Trailer Backup Lamp	963	16	Black-Lt. Green	Top Side of Dash Panel (Part of 14A318) and Rear of Vehicle (Part of 14408)	F/P #34	10A
• Trailer Ground	206	10	White	Rear of Vehicle (Part of 14408)	—	—
• Trailer LH Turn/Stop Lamp	52	16	Yellow	Rear of Vehicle (Part of 14408)	F/P #22	20A
• Trailer RH Turn/Stop Lamp	64	16	Dark Green	Rear of Vehicle (Part of 14408)	F/P #22	20A
• Trailer Running/Park Lamps	962	16	Brown-White	Rear of Vehicle (Part of 14408)	PDB #15	20A
• Trans Tach Output (Park) • Trans Tach Output (Neutral)	1146 463	20 20	Lt. Green-Red Red-White	Top Side of Dash Panel (Part of 14401)	—	—
• Vehicle Speed Output	239	20	White-Orange	Top Side of Dash Panel (Part of 14401)	—	—
• Warning Chime — Seat Belt	85	20	Brown-Lt. Blue	Top Side of Dash Panel (Part of 14A318-A)	—	—
• Washer Pump Feed • Wiper Motor Feed — Common • Wiper Motor Feed — High • Wiper Motor Feed — Ignition • Wiper Motor Feed — Low • Wiper Motor Feed — Switch	941 61 58 65 56 28	14 14 14 14 14 14	Black-White Yellow-Red White Dark Green Dark Blue-Orange Black-Pink Stripe	Front Side of Dash Panel (Part of 17B587)	F/P #11	30A
• Brake Transmission Shift Interlock (BTSI)	32	10	Red-Lt. Blue	Top Side of Dash Panel (Connects to 14401)	F/P #F4	10A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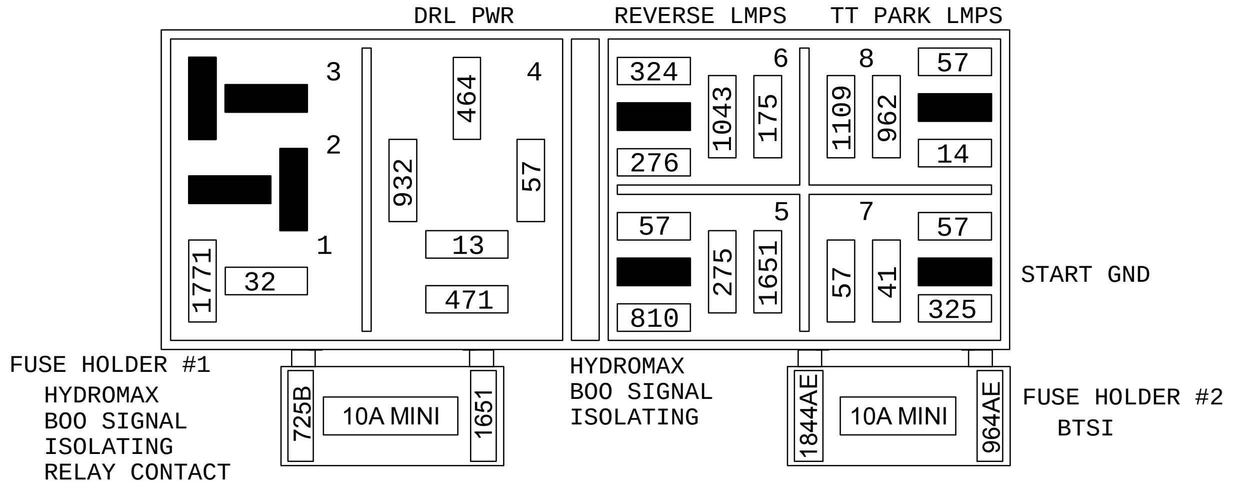
DIODE2

POWER DISTRIBUTION BOX
(Typical)*

NOTES — 14A032, 14A318, 17B587, 14408, 13A840, and 18A840 wire harness assemblies are provided in dunnage box.
Fuse panel (F/P) is located on 14A032-A wire harness provided in dunnage box.
Power Distribution Box (PDB) is located on 12A581 wire harness assembly located in engine compartment.
Refer to Owners Guide for a complete list of fuse and relay circuits/components.

12A581 AUX RELAY BOX (Top View)*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TT PARK LMPS
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1771
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471
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1043
175
1109
962
276
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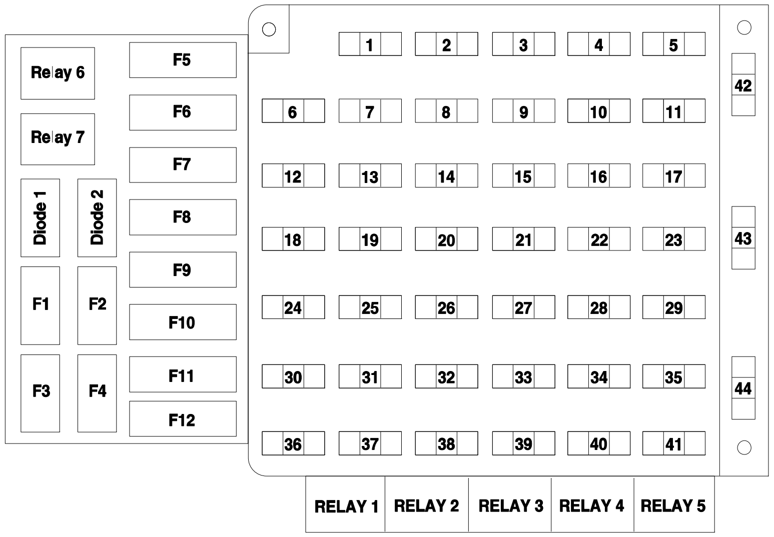
5
7
57
275
1651
57
41
810
325
START GND
FUSE HOLDER #1
HYDROMAX
BOO SIGNAL
ISOLATING
RELAY CONTACT
725B
10A MINI
1651
HYDROMAX
BOO SIGNAL
ISOLATING
1844AE
10A MINI
964AE
FUSE HOLDER #2
BTSI


Relay 6
Relay 7
Diode 1
Diode 2
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RELAY 1
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RELAY 3
RELAY 4
RELAY 5

FUSE PANEL (Typical)*

*See Owner Guide for specific information